



# Environmental Protection Division

Document Identification	
ESH&Q Doc. #:	Other :
ENV-Group:	EAQ
Doc. #:	ESHQ-08-047

Is this a response to an action item? Yes ☐ No ☒

E Mail ☐

Document Date: 08/05/2008

Memo ☐

Document Due Date: 08/14/2008

Letter ☒

<b>To:</b>	Compliance Reporting Manager, Air Quality Bureau, New Mexico Environment Department
<b>Subject:</b>	Semi-Annual Operating Permit Monitoring Report (January - June 2008)
<b>Action:</b>	Review and Endorse
<b>Background:</b>	See form 1824
<b>Issues:</b>	See form 1824

Authorizing Official	Name	Approved		Date
		Yes	No	
From				
Author	David Paulson	✓		8/6/08
Group/Deputy Group Leader	Dianne Wilburn	✓		See Form 1824
Division Leader	Victoria A. George			See Form 1824
Associate Director	Richard S. Watkins			See Form 1824
ADC Review	Steve Story	✓		8/11/08
Security Review (S-7)				
LC-LESH Review	Phil Wardwell			See Form 1824
Coordinated with Facility or Program				

Comments and/or Special Instructions:

Group Office Use Only
-----------------------

Completed Final Distribution	
Distributed To: IRM-RMMSO, A150	

## Signature/Review/Coordination Sheet

This form is to accompany all documents requiring review, approval, or signature by the Laboratory Director or Designee.

Date 8/05/08	Deadline 08/14/08	Is this a response to an action item? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
From: Name: David L. Paulson MS: J978		<input checked="" type="checkbox"/> Call for Pick-up Name: David L. Paulson Phone: 665-8884

**Title:** Identify document, briefly describing subject matter.

Semi-annual Monitoring Report (January - June 2008), Air Quality Operating Permit P100-M2

☐ Action ☒ Information Only

**Background/Issues:**

Semi-Annual monitoring report required under Permit Condition 4.2. This report is required to address all monitoring activities, and be submitted within 45 days from the end of the reporting period (period ends June 30, 2008, report due August 14, 2008 to NMED).

**ACTION requested of Laboratory Director or Designee:**

Review and endorse correspondence to NMED.


NMED-AQB requires the use of the "Reporting Submittal Form" with all correspondence. This is not an attachment.

*Because Title V report - certification by ADESH+Q (per discussions w/ NMED-AQB).*



**PAD Endorsement**

Name (print)	Signature	Date

**AD Endorsement**

Name (print)	Signature	Date
Richard S. Watkins		8/7/08

**Coordinated with**

1. Name (print)	Signature	Date
Victoria George, ENV-DO		8/7/08
2. Name (print)	Signature	Date
Phil Wardwell, LC-LESH		
3. Name (print)	Signature	Date
Dianne Wilburn, ENV-EAQ		8/7/08
4. Name (print)	Signature	Date
5. Name (print)	Signature	Date

Please ensure appropriate inter/intra Directorate/Divisional coordination and review prior to submittal to the Director's Office.

X-Sieve: CMU Sieve 2.2

X-CTN-5-Virus-Scanner: amavisd-new at mailrelay2.lanl.gov

Subject: Re: Review of Monitoring Report

To: Dave Paulson <dpaulson@lanl.gov>

X-Mailer: Lotus Notes Release 6.5.1 January 21, 2004

From: wardwell@lanl.gov

Date: Thu, 7 Aug 2008 13:17:48 -0600

X-MIMETrack: Serialize by Router on WPCMail03P/LANL(Release 7.0.3|September 26, 2007) at 08/07/2008 01:17:50 PM

X-CTN-5-MailScanner-Information: Please see <http://network.lanl.gov/email/virus-scan.php>

X-CTN-5-MailScanner: Found to be clean

X-CTN-5-MailScanner-From: wardwell@lanl.gov

X-Spam-Status: No

Dave - After reviewing the report and discussing it with you, I approve. I think the report is fine.

Phil Wardwell  
Office of Laboratory Counsel  
Environment, Safety and Health Practice Group  
Mail Stop A 187  
Telephone 505 667 3766  
Fax 505 665 4424

+----->  
| Dave Paulson |  
| <dpaulson@lanl.gov> |  
| v> |  
| 08/05/2008 05:18 |  
| PM |  
+----->

>----->  
| To: Phil Wardwell <wardwell@lanl.gov> |  
| cc: |  
| Subject: Review of Monitoring Report |  
>----->

Phil,

Would you please review the attached monitoring report and provide comment/approval. If you approve of the report, please provide me with an e-mail stating such so I can include it with the report package to be signed. If you have any questions, please do not hesitate to contact me.

Thank you,  
Dave

~~~~~



New Mexico Environment Department  
Air Quality Bureau  
Compliance and Enforcement Section  
1301 Siler Road Building B  
Santa Fe, NM 87507  
Phone (505) 476-4300 Fax (505) 476-4375



Version 07.03.08

|               |  |
|---------------|--|
| NMED USE ONLY |  |
| DTS           |  |
| TEMPO         |  |

## REPORTING SUBMITTAL FORM

|               |  |
|---------------|--|
| NMED USE ONLY |  |
| Staff         |  |
| Admin         |  |

PLEASE NOTE: ® - Indicates required field

|                                                                       |                                            |                                                              |                                                   |
|-----------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------|---------------------------------------------------|
| <b>SECTION I - GENERAL COMPANY AND FACILITY INFORMATION</b>           |                                            |                                                              |                                                   |
| <b>A. ® Company Name:</b><br>Los Alamos National Security             |                                            | <b>D. ® Facility Name:</b><br>Los Alamos National Laboratory |                                                   |
| <b>B.1 ® Company Address:</b><br>P.O. Box 1663<br>MS J978             |                                            | <b>E.1 ® Facility Address:</b><br>Same as Company            |                                                   |
| <b>B.2 ® City:</b><br>Los Alamos                                      | <b>B.3 ® State:</b><br>NM                  | <b>B.4 ® Zip:</b><br>87545                                   | <b>E.2 ® City:</b>                                |
| <b>C.1 ® Company Environmental Contact:</b><br>Dianne Wilburn         | <b>C.2 ® Title:</b><br>EAQ Group Leader    | <b>F.1 ® Facility Contact:</b><br>Steve Story                | <b>F.2 ® Title:</b><br>Air Compliance Team Leader |
| <b>C.3 ® Phone Number:</b><br>505-667-6952                            | <b>C.4 ® Fax Number:</b><br>505-665-8858   | <b>F.3 ® Phone Number:</b><br>505-665-2169                   | <b>F.4 ® Fax Number:</b><br>505-665-8858          |
| <b>C.5 ® Email Address:</b><br>dianne@lanl.gov                        |                                            | <b>F.5 ® Email Address:</b><br>story@lanl.gov                |                                                   |
| <b>G. Responsible Official: (Title V only):</b><br>Richard S. Watkins |                                            | <b>H. Title:</b><br>Associate Director ESH&Q                 | <b>J. Fax Number:</b><br>505-665-3811             |
| <b>K. ® AI Number:</b><br>856                                         | <b>L. Title V Permit Number:</b><br>P100M2 | <b>M. Title V Permit Issue Date:</b><br>7/16/2007            | <b>N. NSR Permit Number:</b><br>2195              |
| <b>O. NSR Permit Issue Date:</b><br>Various                           |                                            |                                                              |                                                   |
| <b>P. Reporting Period:</b><br>From: 1/1/2008 To: 6/30/2008           |                                            | <b>Q. Proposed Test Date:</b>                                | <b>R. Actual Test Date:</b>                       |

|                                                                |                                                                   |                                                                                                                                                          |                                                                             |
|----------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>SECTION II - TYPE OF SUBMITTAL (check one that applies)</b> |                                                                   |                                                                                                                                                          |                                                                             |
| <b>A. <input type="checkbox"/></b>                             | <b>Title V Annual Compliance Certification</b>                    | <b>Permit Condition(s):</b>                                                                                                                              | <b>Description:</b>                                                         |
| <b>B. <input checked="" type="checkbox"/></b>                  | <b>Title V Semi-annual Monitoring Report</b>                      | <b>Permit Condition(s):</b><br>All Monitoring                                                                                                            | <b>Description:</b><br>LANL Semi-Annual Monitoring Report January-June 2008 |
| <b>C. <input type="checkbox"/></b>                             | <b>NSPS Requirement (40CFR60)</b>                                 | <b>Regulation:</b>                                                                                                                                       | <b>Section(s):</b><br><b>Description:</b>                                   |
| <b>D. <input type="checkbox"/></b>                             | <b>MACT Requirement (40CFR63)</b>                                 | <b>Regulation:</b>                                                                                                                                       | <b>Section(s):</b><br><b>Description:</b>                                   |
| <b>E. <input type="checkbox"/></b>                             | <b>NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)</b> | <b>Regulation:</b>                                                                                                                                       | <b>Section(s):</b><br><b>Description:</b>                                   |
| <b>F. <input type="checkbox"/></b>                             | <b>Permit or Notice of Intent (NOI) Requirement</b>               | <b>Permit No. <input type="checkbox"/>: or NOI No. <input type="checkbox"/>:</b>                                                                         | <b>Condition(s):</b><br><b>Description:</b>                                 |
| <b>G. <input type="checkbox"/></b>                             | <b>Requirement of an Enforcement Action</b>                       | <b>NOV No. <input type="checkbox"/>: or SFO No. <input type="checkbox"/>:<br/>or CD No. <input type="checkbox"/>: or Other <input type="checkbox"/>:</b> | <b>Section(s):</b><br><b>Description:</b>                                   |

|                                                                                                             |                                                           |                                                       |                                                  |                                                            |                                                                      |                                                   |  |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------|--|
| <b>SECTION III - PERIODIC EMISSIONS TEST NOTIFICATIONS, TEST PROTOCOLS AND TEST REPORTS (if applicable)</b> |                                                           |                                                       |                                                  |                                                            |                                                                      |                                                   |  |
| <b>T. <input type="checkbox"/></b>                                                                          | <b>A. Test Report <input type="checkbox"/> CMT: _____</b> |                                                       | <b>B. Test Protocol <input type="checkbox"/></b> | <b>C. Notification <input type="checkbox"/> CMT: _____</b> |                                                                      | <b>Description: (Emission Units to be Tested)</b> |  |
|                                                                                                             | <b>D. Test (EPA Methods) <input type="checkbox"/></b>     | <b>E. Test (EPA Methods) <input type="checkbox"/></b> | <b>F. RATA Test <input type="checkbox"/></b>     | <b>G. Opacity Test <input type="checkbox"/></b>            | <b>H. Portable Analyzer (Periodic Test) <input type="checkbox"/></b> |                                                   |  |

|                                                                                                                                                                      |  |                                                                                                                   |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>SECTION IV - CERTIFICATION</b>                                                                                                                                    |  |                                                                                                                   |                          |
| After reasonable inquiry, I <u>Richard S. Watkins</u> certify that the information in this submittal is true, accurate and complete.<br>(name of reporting official) |  |                                                                                                                   |                          |
| <b>® Signature of Reporting Official:</b><br>                                                                                                                        |  | <b>® Title:</b><br>Assoc. Director ESH&Q                                                                          | <b>® Date:</b><br>8/7/08 |
|                                                                                                                                                                      |  | <b>® Responsible Official for Title V?</b><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                          |

Reviewed By: \_\_\_\_\_

Date Reviewed: \_\_\_\_\_



*Environmental, Safety, Health & Quality*

PO Box 1663, MS K491

Los Alamos, New Mexico 87545

505-667-4218/Fax 505-665-3811

Date: August 7, 2008

Refer To: ESH&Q-08-047

Compliance Reporting Manager  
New Mexico Environment Department  
Air Quality Bureau  
1301 Siler Road, Building B  
Santa Fe, New Mexico 87507

**SUBJECT: SEMI-ANNUAL MONITORING REPORT FOR JANUARY – JUNE 2008  
AIR QUALITY TITLE V OPERATING PERMIT P100-M2  
IDEA ID No. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)**

Dear Compliance Reporting Manager:

Enclosed is Los Alamos National Laboratory's Title V Operating Permit Semi-Annual Monitoring Report for the period **January 1 – June 30, 2008** (Enclosure-1). This submission is required by permit condition 4.2 of Operating Permit P100-M2 and is being submitted within the allowed 45 days after the end of the reporting period as specified in permit condition 4.3. No deviations were identified during this reporting period.

If you have any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact Steve Story at 665-2169 or David Paulson at 665-8884.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard S. Watkins", written over a horizontal line.

Richard S. Watkins  
Associate Director, ESH&Q

DLP

Enc: a/s

Cy: M. Mallory, w/o enc.,ADPADOPS, A102  
S. Fong, w/o enc., DOE-LA-AO, A316  
P. Wardwell, w/o enc., LC-ESH, A187  
D. Wilburn, w/o enc., ENV-EAQ, J978  
S. Story, w/o enc., ENV-EAQ, J978  
D. Paulson, w/o enc., ENV-EAQ, J978  
J. Stanton, w/o enc., SSS-AE-V02, A199  
ENV-DO FILE  
IRM-RMSSO, A150  
ENV-EAQ Title V Monitoring Report File

# **Enclosure - 1**

Los Alamos National Laboratory's  
Title V Operating Permit  
Monitoring Report for the period  
**January 1 – June 30, 2008**

# Title V Report Certification Form

|                                                                                                                                                                                                                                                                                                                                            |                                   |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------|
| <b>I. Report Type</b>                                                                                                                                                                                                                                                                                                                      |                                   |                   |
| <input type="checkbox"/> Annual Compliance Certification                                                                                                                                                                                                                                                                                   |                                   |                   |
| <input checked="" type="checkbox"/> Semi-Annual Monitoring Report                                                                                                                                                                                                                                                                          |                                   |                   |
| <input type="checkbox"/> Other Specify:                                                                                                                                                                                                                                                                                                    |                                   |                   |
| <b>II. Identifying Information</b>                                                                                                                                                                                                                                                                                                         |                                   |                   |
| Facility Name: Los Alamos National Laboratory                                                                                                                                                                                                                                                                                              |                                   |                   |
| Facility Address: P.O. Box 1663, MS J978, Los Alamos                                                                                                                                                                                                                                                                                       | State: NM                         | Zip: 87545        |
| Responsible Official (RO): Richard S. Watkins                                                                                                                                                                                                                                                                                              | Phone: 505-667-4218               | Fax: 505-665-3811 |
| RO Title: Assoc. Director Environmental, Safety, Health, and Quality                                                                                                                                                                                                                                                                       | RO e-mail: rswatkin@lanl.gov      |                   |
| Permit No.: P100M2                                                                                                                                                                                                                                                                                                                         | Date Permit Issued: July 16, 2007 |                   |
| Report Due Date (as required by the permit): 08/14/2008                                                                                                                                                                                                                                                                                    | Permit AI number: 856             |                   |
| Time period covered by this Report: From: January 1, 2008                                                                                                                                                                                                                                                                                  |                                   | To: June 30, 2008 |
| <b>III. Certification of Truth, Accuracy, and Completeness</b>                                                                                                                                                                                                                                                                             |                                   |                   |
| <p>I am the Responsible Official indicated above. I, <u>(Richard S. Watkins)</u> certify that I meet the requirements of 20.2.70.7.AD NMAC. I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached Title V report are true, accurate, and complete.</p> |                                   |                   |
| Signature <u>Richard S. Watkins</u> Date: <u>8/7/08</u>                                                                                                                                                                                                                                                                                    |                                   |                   |

LA-UR-08-05152

Approved for public release;  
distribution is unlimited.

*Title:* Semi-Annual Monitoring Report  
January 1 - June 30, 2008  
Air Quality Operating Permit P100M2  
Los Alamos National Laboratory

*Author(s):* David Paulson, ENV-EAQ

*Intended for:* Compliance Reporting Manager  
New Mexico Environment Department - Air Quality Bureau  
1301 Siler Road, Building B  
Santa Fe, New Mexico 87507



Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the Los Alamos National Security, LLC for the National Nuclear Security Administration of the U.S. Department of Energy under contract DE-AC52-06NA25396. By acceptance of this article, the publisher recognizes that the U.S. Government retains a nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

# **Title V Semi - Annual Monitoring Report for Permit P100M2**

## **Part 1 – Monitoring Activity Reporting Requirements**

### **4.0 REPORTING**

Conditions of 4.0 are pursuant to 20.2.70.302.E NMAC.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.
- 4.3 The report required by Condition 4.1 shall be submitted within 90 days from the end of the reporting period. The semiannual report required by Condition 4.2 shall be submitted within 45 days from the end of the reporting period. The reporting periods are January 1<sup>st</sup> to June 30<sup>th</sup> and July 1<sup>st</sup> to December 31<sup>st</sup>. This condition is pursuant to 20.2.70.302.E.1 NMAC.
- 4.4 The permittee shall submit reports of all deviations (including emergencies) from permit requirements to the Department when they occur. The permittee shall communicate initial notice of the deviation to the Department within twenty-four (24) hours of the start of the first business day following the start of the occurrence via telephone or facsimile. Within ten (10) calendar days of the start of the first business day following the start of the occurrence, written notice using the Excess Emissions Form (attached to this permit) shall be submitted to the Department. This condition is pursuant to 20.2.70.302.E.2. NMAC.

## Specific Monitoring Reports:

### 2.1 Asphalt Production

#### 2.1.4 Emissions Monitoring Requirements

- 2.1.4.1 Perform monthly six (6) minute opacity readings for each emission point having opacity greater than zero as determined by EPA Method 22.
- 2.1.4.2 Monitor the differential pressure (inches of water) across the baghouse by the use of a differential pressure gauge, in accordance with condition IV.C.2 of NSR permit number GCP-3-2195G.
- 2.1.4.3 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

#### Reporting Requirement

- 2.1.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes

Date report submitted:

Tracking Number:

☒ No

Provide comments and identify any supporting documentation as an attachment.

#### Comments:

- 2.1.4.1 See **Attachment 1** for monthly opacity reports. Monthly six minute opacity readings are taken using the required EPA Methods.
- 2.1.4.2 A differential pressure gauge is in place to continuously monitor the differential pressure across the baghouse as required by NSR permit GCP-3-2195G condition IV.C.2. The differential pressure is recorded twice each day during operations. This is consistent with NSR permit GCP-3-2195G condition IV.D.2(e). Records are available on-site for NMED inspection.
- 2.1.4.3 LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

**Attachment 1**  
**Asphalt Plant Opacity Reports**

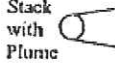
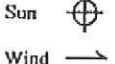

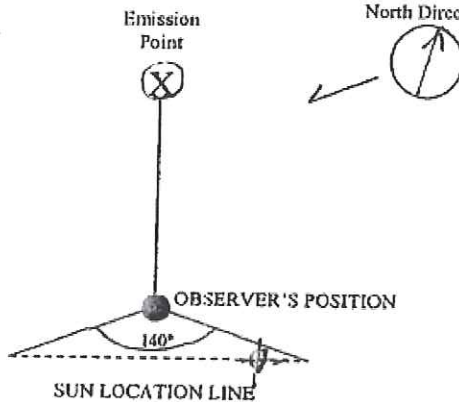
**Summary Table, Reports Attached**

| <b>Month</b> | <b>Read Location</b> | <b>Date</b> | <b>Time</b> | <b>Average Opacity</b> | <b>EPA Method</b> |
|--------------|----------------------|-------------|-------------|------------------------|-------------------|
| January      | Top of Shaker        | 01/15/08    | 9:07 am     | 0                      | 9 <sup>(a)</sup>  |
| February     | Top of Shaker        | 02/12/08    | 8:46 am     | 0                      | 9 <sup>(a)</sup>  |
| March        | Top of Shaker        | 03/05/08    | 8:34 am     | 0                      | 9 <sup>(a)</sup>  |
| April        | Top of Shaker        | 04/01/08    | 8:42 am     | 0                      | 9 <sup>(a)</sup>  |
| May          | Top of Shaker        | 05/13/08    | 8:40 am     | 0                      | 9 <sup>(a)</sup>  |
| June         | Top of Shaker        | 06/03/08    | 12:55 pm    | 0                      | 9 <sup>(a)</sup>  |

(a) EPA Method 9 was used. Average opacity for the Asphalt Plant is the sum of the highest consecutive 24 readings divided by 24 (6 minutes of readings). The method is in accordance with 20.2.61 NMAC and conditions 2.1.4.1 and 2.1.4.3 of the Los Alamos National Laboratory (LANL) Operating Permit P100M2.

**LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)**

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>LANL Asphalt Plant</b>                                                                                                                                                                                                                              |                                                                                                                                                                                |
| Source Location:<br><b>TA-60 (Sigma Mesa)</b>                                                                                                                                                                                                                          |                                                                                                                                                                                |
| Type of Source<br><b>Asphalt Plant</b>                                                                                                                                                                                                                                 | Type of Control Equipment<br><b>Baghouse</b>                                                                                                                                   |
| Describe Emission Point (Top of stack, etc.)<br><b>TOP OF SHAKER STACK</b>                                                                                                                                                                                             |                                                                                                                                                                                |
| Height Above Ground Level<br><b>45</b> Feet                                                                                                                                                                                                                            | Height Relative to Observer<br><b>45</b> Feet                                                                                                                                  |
| Distance From Observer<br><b>55</b> Feet                                                                                                                                                                                                                               | Direction of Source From Observer<br><b>NW</b>                                                                                                                                 |
| Description of Plume (stack exit only)<br><input type="checkbox"/> Lofting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                |
| Emission Color<br><b>NO EMISSION</b>                                                                                                                                                                                                                                   | Plume Type <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                            |                                                                                                                                                                                |
| At what point in the plume was opacity determined?<br><b>2 FT. ABOVE TOP OF STACK</b>                                                                                                                                                                                  |                                                                                                                                                                                |
| Describe Background (i.e. blue sky, trees, etc.)<br><b>Blue sky</b>                                                                                                                                                                                                    |                                                                                                                                                                                |
| Background Color<br><b>Blue</b>                                                                                                                                                                                                                                        | Sky Conditions<br><b>Clear</b>                                                                                                                                                 |
| Wind Speed<br><b>264</b> mph                                                                                                                                                                                                                                           | Wind Direction<br>(provide from/to, i.e. from North to South)<br><b>from NE</b>                                                                                                |
| Ambient Temperature<br><b>23</b> °F                                                                                                                                                                                                                                    | Relative Humidity<br><b>44</b> %                                                                                                                                               |
| Additional Comments/Information:<br><b>All emission points clear</b>                                                                                                                                                                                                   |                                                                                                                                                                                |




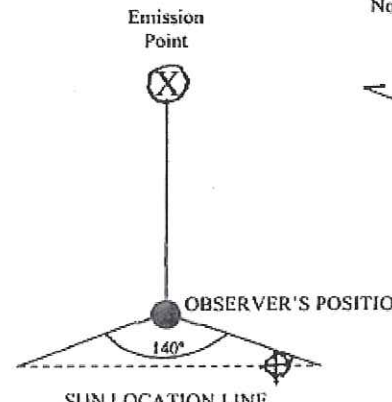
|                                                                                                                                                                                                                                                                                             |                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Stack with Plume <br>Sun <br>Wind  | <b>SOURCE LAYOUT SKETCH</b><br> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

| Observation Date<br><b>1-15-08</b>                                       |     | Start Time<br><b>0907</b> |    | End Time<br><b>0913</b>                                    |    |          |
|--------------------------------------------------------------------------|-----|---------------------------|----|------------------------------------------------------------|----|----------|
| Min                                                                      | Sec | 0                         | 15 | 30                                                         | 45 | Comments |
| 1                                                                        |     | 0                         | 0  | 0                                                          | 0  |          |
| 2                                                                        |     | 0                         | 0  | 0                                                          | 0  |          |
| 3                                                                        |     | 0                         | 0  | 0                                                          | 0  |          |
| 4                                                                        |     | 0                         | 0  | 0                                                          | 0  |          |
| 5                                                                        |     | 0                         | 0  | 0                                                          | 0  |          |
| 6                                                                        |     | 0                         | 0  | 0                                                          | 0  |          |
| 7                                                                        |     |                           |    |                                                            |    |          |
| 8                                                                        |     |                           |    |                                                            |    |          |
| 9                                                                        |     |                           |    |                                                            |    |          |
| 10                                                                       |     |                           |    |                                                            |    |          |
| 11                                                                       |     |                           |    |                                                            |    |          |
| 12                                                                       |     |                           |    |                                                            |    |          |
| 13                                                                       |     |                           |    |                                                            |    |          |
| 14                                                                       |     |                           |    |                                                            |    |          |
| 15                                                                       |     |                           |    |                                                            |    |          |
| 16                                                                       |     |                           |    |                                                            |    |          |
| 17                                                                       |     |                           |    |                                                            |    |          |
| 18                                                                       |     |                           |    |                                                            |    |          |
| 19                                                                       |     |                           |    |                                                            |    |          |
| 20                                                                       |     |                           |    |                                                            |    |          |
| Average 6-Minute Opacity<br><b>0%</b>                                    |     |                           |    | Range of Opacity Readings<br>Min. <b>0%</b> Max. <b>0%</b> |    |          |
| OBSERVER (please print)<br>Name: <b>Don Stone</b> Title: <b>Engineer</b> |     |                           |    |                                                            |    |          |
| Signature: <b>Don Stone</b>                                              |     |                           |    | Date: <b>1-15-08</b>                                       |    |          |
| Observer Organization: <b>KSL</b>                                        |     |                           |    |                                                            |    |          |
| Certified by: <b>ETA</b>                                                 |     |                           |    | Certification Date: <b>8-29-07</b>                         |    |          |

ENV-EAQ-307, R3, ATTACHMENT 2 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>LANL Asphalt Plant</b>                                                                                                                                                                                                                              |                                                                                                                                                                                 |
| Source Location:<br><b>TA-60 (Sigma Mesa)</b>                                                                                                                                                                                                                          |                                                                                                                                                                                 |
| Type of Source:<br><b>Asphalt Plant</b>                                                                                                                                                                                                                                | Type of Control Equipment:<br><b>Baghouse</b>                                                                                                                                   |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of shaker stack</b>                                                                                                                                                                                            |                                                                                                                                                                                 |
| Height Above Ground Level:<br><b>45 Feet</b>                                                                                                                                                                                                                           | Height Relative to Observer:<br><b>45 Feet</b>                                                                                                                                  |
| Distance From Observer:<br><b>65 Feet</b>                                                                                                                                                                                                                              | Direction of Source From Observer:<br><b>NW</b>                                                                                                                                 |
| Description of Plume (stack exit only)<br><input type="checkbox"/> Lofting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><b>NO EMISSION</b>                                                                                                                                                                                                                                  | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input type="checkbox"/> NO <input checked="" type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input checked="" type="checkbox"/> Detached                                                                 |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><b>1 ft. above top of stack</b>                                                                                                                                                                                  |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                   |                                                                                                                                                                                 |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                       | Sky Conditions:<br><b>clear</b>                                                                                                                                                 |
| Wind Speed:<br><b>3-5 mph</b>                                                                                                                                                                                                                                          | Wind Direction:<br>(provide from/to, i.e. from North to South)<br><b>from ESE</b>                                                                                               |
| Ambient Temperature:<br><b>30 °F</b>                                                                                                                                                                                                                                   | Relative Humidity:<br><b>62 %</b>                                                                                                                                               |
| Additional Comments/Information:<br><b>All emission points clear</b>                                                                                                                                                                                                   |                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                      |                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Stack with Plume<br><br>Sun<br><br>Wind<br> | <b>SOURCE LAYOUT SKETCH</b><br> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

|                                     |     |                            |    |                          |    |
|-------------------------------------|-----|----------------------------|----|--------------------------|----|
| Observation Date:<br><b>2-12-08</b> |     | Start Time:<br><b>0846</b> |    | End Time:<br><b>0852</b> |    |
| Min                                 | Sec | 0                          | 15 | 30                       | 45 |
|                                     |     | Comments                   |    |                          |    |
| 1                                   |     | 0                          | 0  | 0                        | 0  |
| 2                                   |     | 0                          | 0  | 0                        | 0  |
| 3                                   |     | 0                          | 0  | 0                        | 0  |
| 4                                   |     | 0                          | 0  | 0                        | 0  |
| 5                                   |     | 0                          | 0  | 0                        | 0  |
| 6                                   |     | 0                          | 0  | 0                        | 0  |
| 7                                   |     |                            |    |                          |    |
| 8                                   |     |                            |    |                          |    |
| 9                                   |     |                            |    |                          |    |
| 10                                  |     |                            |    |                          |    |
| 11                                  |     |                            |    |                          |    |
| 12                                  |     |                            |    |                          |    |
| 13                                  |     |                            |    |                          |    |
| 14                                  |     |                            |    |                          |    |
| 15                                  |     |                            |    |                          |    |
| 16                                  |     |                            |    |                          |    |
| 17                                  |     |                            |    |                          |    |
| 18                                  |     |                            |    |                          |    |
| 19                                  |     |                            |    |                          |    |
| 20                                  |     |                            |    |                          |    |

|                                                                          |                                                            |
|--------------------------------------------------------------------------|------------------------------------------------------------|
| Average 6-Minute Opacity:<br><b>0%</b>                                   | Range of Opacity Readings<br>Min. <b>0%</b> Max. <b>0%</b> |
| OBSERVER (please print)<br>Name: <b>Don Stone</b> Title: <b>Engineer</b> |                                                            |
| Signature: <b>Don Stone</b>                                              | Date: <b>2-12-08</b>                                       |
| Observer Organization: <b>KSL</b>                                        |                                                            |
| Certified by: <b>ETA</b>                                                 | Certification Date: <b>8-29-07</b>                         |

ENV-EAQ-307, R3, ATTACHMENT 2 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name: **LANL ASPHALT PLANT**

Source Location: **TA-60 (Sigma Mesa)**

Type of Source: **Asphalt Plant** Type of Control Equipment: **Baghouse**

Describe Emission Point (Top of stack, etc.): **Top of Shaker Stack**

Height Above Ground Level: **45 Feet** Height Relative to Observer: **45 Feet**

Distance From Observer: **70 Feet** Direction of Source From Observer: **NW**

Description of Plume (stack exit only):  
☐ Lifting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning  
☒ No Plume Present

Emission Color: **N/A** Plume Type: ☒ No Plume Present  
☐ Continuous ☐ Fugitive ☐ Intermittent

Water Droplets Present?  
☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached

At what point in the plume was opacity determined?  
**2 ft above top of stack**

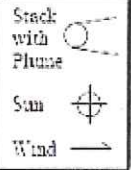
Describe Background (i.e. blue sky, tree, etc.):  
**Blue Sky**

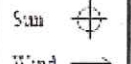
Background Color: **Blue** Sky Conditions: **Clear**


Wind Speed: **3-5 mph** Wind Direction (provide from to, i.e. from North to South):  
**From ESE**

Ambient Temperature: **33 °F** Relative Humidity: **39 %**


Additional Comments/Information:  
**All emission points clear**


Stack with Plume: 

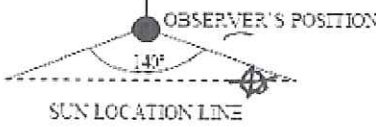
Sun: 

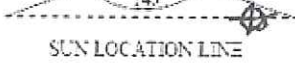
Wind: 

SOURCE LAYOUT SKETCH

Emission Point: 


Draw Arrow in North Direction: 

OBSERVER'S POSITION: 

SUN LOCATION LINE: 

| Observation Date |     | Start Time |    |    |    | End Time |
|------------------|-----|------------|----|----|----|----------|
| 3-5-08           |     | 0834       |    |    |    | 40:45    |
| Min              | Sec | 0          | 15 | 30 | 45 | Comments |
| 1                |     | 0          | 0  | 0  | 0  |          |
| 2                |     | 0          | 0  | 0  | 0  |          |
| 3                |     | 0          | 0  | 0  | 0  |          |
| 4                |     | 0          | 0  | 0  | 0  |          |
| 5                |     | 0          | 0  | 0  | 0  |          |
| 6                |     | 0          | 0  | 0  | 0  |          |
| 7                |     |            |    |    |    |          |
| 8                |     |            |    |    |    |          |
| 9                |     |            |    |    |    |          |
| 10               |     |            |    |    |    |          |
| 11               |     |            |    |    |    |          |
| 12               |     |            |    |    |    |          |
| 13               |     |            |    |    |    |          |
| 14               |     |            |    |    |    |          |
| 15               |     |            |    |    |    |          |
| 16               |     |            |    |    |    |          |
| 17               |     |            |    |    |    |          |
| 18               |     |            |    |    |    |          |
| 19               |     |            |    |    |    |          |
| 20               |     |            |    |    |    |          |

Average 6-Minute Opacity: **0%** Range of Opacity Readings: Min. **0%** Max. **0%**

OBSERVER (please print):  
 Name: **Don Stone** Title: **Engineer**  
 Signature:  Date: **3-5-08**  
 Observer Organization: **KSL**

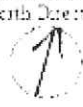



Certified by: **ETA** Certification Date: **3-27-08**

THIS FORM IS FROM EAQ-307, R4

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

|                                                                                                                                                                                                                                                                           |                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>LANL ASPHALT PLANT</b>                                                                                                                                                                                                                                 |                                                                                                                                     |
| Source Location:<br><b>TA-6D (SIGMA MESA)</b>                                                                                                                                                                                                                             |                                                                                                                                     |
| Type of Source:<br><b>ASPHALT PLANT</b>                                                                                                                                                                                                                                   | Type of Control Equipment:<br><b>BAGHOUSE</b>                                                                                       |
| Describe Emission Point (top of stack, etc.):<br><b>TOP OF SHAKER STACK</b>                                                                                                                                                                                               |                                                                                                                                     |
| Height Above Ground Level:<br><b>45 Feet</b>                                                                                                                                                                                                                              | Height Relative to Observer:<br><b>45 Feet</b>                                                                                      |
| Distance From Observer:<br><b>70 Feet</b>                                                                                                                                                                                                                                 | Direction of Source From Observer:<br><b>NW</b>                                                                                     |
| Description of Plume (stack exit only):<br><input type="checkbox"/> Lifting <input type="checkbox"/> Trapping <input type="checkbox"/> Lapping <input type="checkbox"/> Fanning <input type="checkbox"/> Coasting<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                     |
| Plume Color:<br><b>N/A</b>                                                                                                                                                                                                                                                | Plume Type: <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Pulsative <input type="checkbox"/> Intermittent |
| Water Droplet Present:<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (Water droplet plume) <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                                   |                                                                                                                                     |
| At what point in the plume was opacity determined?<br><b>4 ft above top of stack</b>                                                                                                                                                                                      |                                                                                                                                     |
| Describe Background (e.g., blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                     |                                                                                                                                     |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                          | Sky Conditions:<br><b>Clear</b>                                                                                                     |
| Wind Speed:<br><b>5-10 mph</b>                                                                                                                                                                                                                                            | Wind Direction:<br>(provide from 0 to 360 from North to South)<br><b>From S</b>                                                     |
| Ambient Temperature:<br><b>40°F</b>                                                                                                                                                                                                                                       | Relative Humidity:<br><b>46%</b>                                                                                                    |
| Additional Comments/Information:<br><b>All emission points clear</b>                                                                                                                                                                                                      |                                                                                                                                     |

|                                                                                                                            |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Sketch with Plume <input type="checkbox"/></p> <p>Sun <input type="checkbox"/></p> <p>Wind <input type="checkbox"/></p> |  | <p><b>SOURCE LAYOUT SKETCH</b></p> <p>Draw Arrow in North Direction </p> <p>Emission Point </p> <p>Observer's Position </p> <p>SUN LOCATION LINE </p> <p>✓</p> |
|----------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                        |      |                                                             |                          |
|----------------------------------------|------|-------------------------------------------------------------|--------------------------|
| Observation Date:<br><b>4-1-08</b>     |      | Start Time:<br><b>0842</b>                                  | End Time:<br><b>0848</b> |
| Min.                                   | Sec. | 0                                                           | 15                       |
| 1                                      | 0    | 0                                                           | 0                        |
| 2                                      | 0    | 0                                                           | 0                        |
| 3                                      | 0    | 0                                                           | 0                        |
| 4                                      | 0    | 0                                                           | 0                        |
| 5                                      | 0    | 0                                                           | 0                        |
| 6                                      | 0    | 0                                                           | 0                        |
| 7                                      |      |                                                             |                          |
| 8                                      |      |                                                             |                          |
| 9                                      |      |                                                             |                          |
| 10                                     |      |                                                             |                          |
| 11                                     |      |                                                             |                          |
| 12                                     |      |                                                             |                          |
| 13                                     |      |                                                             |                          |
| 14                                     |      |                                                             |                          |
| 15                                     |      |                                                             |                          |
| 16                                     |      |                                                             |                          |
| 17                                     |      |                                                             |                          |
| 18                                     |      |                                                             |                          |
| 19                                     |      |                                                             |                          |
| 20                                     |      |                                                             |                          |
| Average 6-Minute Opacity:<br><b>0%</b> |      | Range of Opacity Readings:<br>Min. <b>0%</b> Max. <b>0%</b> |                          |
| OBSERVER (please print):               |      |                                                             |                          |
| Name:<br><b>Don Stone</b>              |      | Title:<br><b>Engineer</b>                                   |                          |
| Signature:<br><b>Don Stone</b>         |      | Date:<br><b>4-1-08</b>                                      |                          |
| Observer Organization:<br><b>KSL</b>   |      |                                                             |                          |
| Certified by:<br><b>ETA</b>            |      | Certification Date:<br><b>02-27-08</b>                      |                          |

THIS FORM IS FROM EAQ-307, R4

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

|                                                                                                                                                                                                                                                                          |                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>LANL ASPHALT PLANT</b>                                                                                                                                                                                                                                |                                                                                                                                                                                 |
| Source Location:<br><b>TA-60 (Sigma Mesa)</b>                                                                                                                                                                                                                            |                                                                                                                                                                                 |
| Type of Source:<br><b>Asphalt Plant</b>                                                                                                                                                                                                                                  | Type of Control Equipment:<br><b>Baghouse</b>                                                                                                                                   |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of shaker stack</b>                                                                                                                                                                                              |                                                                                                                                                                                 |
| Height Above Ground Level:<br><b>45</b> Feet                                                                                                                                                                                                                             | Height Relative to Observer:<br><b>45</b> Feet                                                                                                                                  |
| Distance From Observer:<br><b>60</b> Feet                                                                                                                                                                                                                                | Direction of Source From Observer:<br><b>NW</b>                                                                                                                                 |
| Description of Plume (stack exit only):<br><input type="checkbox"/> Lofting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coiling<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><b>N/A</b>                                                                                                                                                                                                                                            | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                              |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><b>2 ft. above top of stack</b>                                                                                                                                                                                    |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                     |                                                                                                                                                                                 |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                         | Sky Conditions:<br><b>Scattered clouds</b>                                                                                                                                      |
| Wind Speed:<br><b>4-7</b> mph                                                                                                                                                                                                                                            | Wind Direction:<br>(provide from to, i.e. from North to South)<br><b>From ESE to WSW</b>                                                                                        |
| Ambient Temperature:<br><b>48</b> °F                                                                                                                                                                                                                                     | Relative Humidity:<br><b>33</b> %                                                                                                                                               |
| Additional Comments Information:<br><b>ALL EMISSION POINTS CLEAR</b>                                                                                                                                                                                                     |                                                                                                                                                                                 |

|                                 |                                   |
|---------------------------------|-----------------------------------|
| SOURCE LAYOUT SKETCH            |                                   |
| Stack with Plume<br>Sun<br>Wind | Draw Arrow in North Direction<br> |

| Observation Date |     | Start Time |    |    |    | End Time |
|------------------|-----|------------|----|----|----|----------|
| 5-13-08          |     | 0840       |    |    |    | 0846     |
| Min              | Sec | 0          | 15 | 30 | 45 | Comments |
| 1                |     | 0          | 0  | 0  | 0  |          |
| 2                |     | 0          | 0  | 0  | 0  |          |
| 3                |     | 0          | 0  | 0  | 0  |          |
| 4                |     | 0          | 0  | 0  | 0  |          |
| 5                |     | 0          | 0  | 0  | 0  |          |
| 6                |     | 0          | 0  | 0  | 0  |          |
| 7                |     |            |    |    |    |          |
| 8                |     |            |    |    |    |          |
| 9                |     |            |    |    |    |          |
| 10               |     |            |    |    |    |          |
| 11               |     |            |    |    |    |          |
| 12               |     |            |    |    |    |          |
| 13               |     |            |    |    |    |          |
| 14               |     |            |    |    |    |          |
| 15               |     |            |    |    |    |          |
| 16               |     |            |    |    |    |          |
| 17               |     |            |    |    |    |          |
| 18               |     |            |    |    |    |          |
| 19               |     |            |    |    |    |          |
| 20               |     |            |    |    |    |          |

|                                                                           |                                                             |
|---------------------------------------------------------------------------|-------------------------------------------------------------|
| Average 6-Minute Opacity:<br><b>0%</b>                                    | Range of Opacity Readings:<br>Min. <b>0%</b> Max. <b>0%</b> |
| OBSERVER (please print):<br>Name: <b>Don Stone</b> Title: <b>Engineer</b> |                                                             |
| Signature: <b>Don Stone</b> Date: <b>5-13-08</b>                          |                                                             |
| Observer Organization:<br><b>KSL</b>                                      |                                                             |
| Certified by:<br><b>FTA</b>                                               | Certification Date:<br><b>2-27-08</b>                       |

THIS FORM IS FROM EAQ-307, R4

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>LANL Asphalt Plant</b>                                                                                                                                                                                                                               |                                                                                                                                                                                 |
| Source Location:<br><b>TA-6D (Sismo Mesa)</b>                                                                                                                                                                                                                           |                                                                                                                                                                                 |
| Type of Source:<br><b>Asphalt Plant</b>                                                                                                                                                                                                                                 | Type of Control Equipment:<br><b>Baghouse</b>                                                                                                                                   |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of shaker stack</b>                                                                                                                                                                                             |                                                                                                                                                                                 |
| Height Above Ground Level:<br><b>45 Feet</b>                                                                                                                                                                                                                            | Height Relative to Observer:<br><b>45 Feet</b>                                                                                                                                  |
| Distance From Observer:<br><b>60 Feet</b>                                                                                                                                                                                                                               | Direction of Source From Observer:<br><b>NW</b>                                                                                                                                 |
| Description of Plume (stack exit only)<br><input type="checkbox"/> Lifting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coiling<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><b>N/A</b>                                                                                                                                                                                                                                           | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplet Present:<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                        |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><b>4 ft. above top of stack</b>                                                                                                                                                                                   |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue Sky</b>                                                                                                                                                                                                    |                                                                                                                                                                                 |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                        | Sky Condition:<br><b>Clear</b>                                                                                                                                                  |
| Wind Speed:<br><b>10-15 mph</b>                                                                                                                                                                                                                                         | Wind Direction (provide from to, i.e. from North to South):<br><b>From W</b>                                                                                                    |
| Ambient Temperature:<br><b>73 °F</b>                                                                                                                                                                                                                                    | Relative Humidity:<br><b>13 %</b>                                                                                                                                               |
| Additional Comments/Information:<br><b>All emission points clear</b>                                                                                                                                                                                                    |                                                                                                                                                                                 |

|                  |                      |                               |
|------------------|----------------------|-------------------------------|
| Stack with Plume | SOURCE LAYOUT SKETCH | Draw Arrow in North Direction |
| Sun              |                      |                               |
| Wind             |                      |                               |
|                  | Observer's Position  |                               |
|                  | SUN LOCATION LINE    |                               |

| Observation Date |     | Start Time |    |    |    | End Time |
|------------------|-----|------------|----|----|----|----------|
| 6-3-08           |     | 1255       |    |    |    | 1301     |
| Min              | Sec | 0          | 15 | 30 | 45 | Comments |
| 1                |     | 0          | 0  | 0  | 0  |          |
| 2                |     | 0          | 0  | 0  | 0  |          |
| 3                |     | 0          | 0  | 0  | 0  |          |
| 4                |     | 0          | 0  | 0  | 0  |          |
| 5                |     | 0          | 0  | 0  | 0  |          |
| 6                |     | 0          | 0  | 0  | 0  |          |
| 7                |     |            |    |    |    |          |
| 8                |     |            |    |    |    |          |
| 9                |     |            |    |    |    |          |
| 10               |     |            |    |    |    |          |
| 11               |     |            |    |    |    |          |
| 12               |     |            |    |    |    |          |
| 13               |     |            |    |    |    |          |
| 14               |     |            |    |    |    |          |
| 15               |     |            |    |    |    |          |
| 16               |     |            |    |    |    |          |
| 17               |     |            |    |    |    |          |
| 18               |     |            |    |    |    |          |
| 19               |     |            |    |    |    |          |
| 20               |     |            |    |    |    |          |

|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Average 6-Minute Opacity:<br><b>0%</b> | Range of Opacity Readings:<br>Min <b>0%</b> Max <b>0%</b> |
| OBSERVER (please print):               |                                                           |
| Name:<br><b>Don Stone</b>              | Title:<br><b>Engineer</b>                                 |
| Signature:<br><i>Don Stone</i>         | Date:<br><b>6-3-08</b>                                    |
| Observer Organization:<br><b>KSL</b>   |                                                           |
| Certified by:<br><b>ETA</b>            | Certification Date:<br><b>2-27-08</b>                     |

THIS FORM IS FROM EAQ-307, R4

## 2.2 Beryllium Activities

| Source                                                | Monitoring Required                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemistry and Metallurgy Research Facility<br>TA-3-29 | A log shall be maintained during operations which indicates the number of Be samples processed.                                                                                                                                                                                                                                                                |
| Sigma Facility<br>TA-3-66                             | A log shall be maintained during operations which shows the number of metallographic specimens used in the polishing operation and the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.                                                                                                   |
| Beryllium Test Facility<br>TA-3-141                   | Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions.<br><br>Cartridge and HEPA filters will be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.                                     |
| TA-16-207                                             | Project files shall be maintained of components prepared for testing.                                                                                                                                                                                                                                                                                          |
| TA-35-87                                              | A log shall be maintained during operations which shows the number of beryllium filters cut.                                                                                                                                                                                                                                                                   |
| Target Fabrication Facility<br>TA-35-213              | Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department.                                                                                                                                     |
| Plutonium Facility<br>TA-55-PF4                       | The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation.<br><br>Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters. |

## Reporting Requirement

| Source                                                | Reporting Required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemistry and Metallurgy Research Facility<br>TA-3-29 | See condition 4.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Sigma Facility<br>TA-3-66                             | See condition 4.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Beryllium Test Facility<br>TA-3-141                   | Anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date.<br><br>Actual date of initial startup of each new or modified source within fifteen (15) days after the startup date.<br><br>Provide the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.<br><br>Notify the Department within 60 days after each calendar quarter of the facility's compliance status with the |

|                                          |                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | permitted emission rate from the continuous monitoring system.<br><br>Provide any data generated by activities described in the Quality Assurance Plan (QAP) that will assist the Air Quality Bureau's Enforcement Section in determining the reliability of the methodology used for demonstrating compliance with the permitted emission rate within 45 days of such a request. |
| TA-16-207                                | See condition 4.2.                                                                                                                                                                                                                                                                                                                                                                |
| TA-35-87                                 | See condition 4.2.                                                                                                                                                                                                                                                                                                                                                                |
| Target Fabrication Facility<br>TA-35-213 | See conditions 4.1 and 4.2.                                                                                                                                                                                                                                                                                                                                                       |
| Plutonium Facility<br>TA-55-PF4          | Stack emission test results and facility operating parameters will be made available to Department personnel upon request.<br><br>Reports may be required to be submitted to the Department if inspections of the source indicate noncompliance with this permit or as a means of determining compliance.                                                                         |

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☒ **Yes**      **Date report submitted:** January 22, 2008 & April 28, 2008 **Tracking Number:** SBR20080004

☐ **No**      **Provide comments and identify any supporting documentation as an attachment.**

**Comments:**

Chemistry and Metallurgy Research Facility (TA-3-29) – This beryllium source was removed from Operating Permit P100M1 as requested by LANL. A letter from NMED-AQB amending the permit was dated July 16, 2007. This amendment resulted in the assignment of Operating Permit No. P100M2.

Sigma Facility (TA-3-66) - A log is maintained showing the number of metallographic specimens used in the polishing operation. Logs are maintained showing the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations. Logs are available on-site for NMED inspection.

Beryllium Test Facility (TA-3-141) - The BTF is equipped with a continuous emissions monitor to measure beryllium emissions. The monitoring system is operated in accordance with LANL Quality Assurance Project Plans and emission results are provided to NMED quarterly. Submissions for this period were

provided to NMED in reports dated January 22, 2008 [ENV-EAQ:08-020] and April 28, 2008 [ENV-EAQ:08-105]. Cartridge and HEPA filters are equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.

TA-16-207 - Project files are maintained of components prepared for testing. Files are available on-site for NMED inspection.

TA-35-87 - A log is maintained showing the number of beryllium filters cut. The log is available on-site for NMED inspection.

Target Fabrication Facility (TA-35-213) - Records of stack emission test results are maintained on-site and are available for NMED inspection. Stack emission test results are used to determine total emissions from this facility.

Plutonium Facility (TA-55-PF4) - The HEPA filtration systems are equipped with differential pressure gauges that measure the differential pressure across the HEPA filters while the exhaust fans are in operation. Control efficiency is verified by daily HEPA filter pressure drop readings. Readings are recorded in the TA-55 Operations Center. Annual HEPA filter challenge tests of accessible filters are performed. Test results are summarized in **Attachment 2**.

**Attachment 2**  
**Beryllium HEPA Filter Tests Results**

**Summary Table, Reports Attached**

| <b>Unit</b>               | <b>Date</b> | <b>Pass/Fail</b> |
|---------------------------|-------------|------------------|
| TA-55 (H-5-1430) (FF-852) | 06/03/2008  | Pass             |
| TA-55 (H-5-1440) (FF-853) | 06/03/2008  | Pass             |

100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

ATTACHMENT A  
100 Area Glovebox Exhaust FF-852 Data Sheet

Date: 06/03/08 (8.4.1) LAS Calibration Expiration Date: 08/01/09 (8.4.3) Diluter Calibration Expiration Date: 09/03/08 (8.4.4) Dilution Ratio: 2.91 (8.4.2)

| Step Number          | Item                                                                                                          | FF-852                                                |
|----------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 9.1.12.2             | Background concentration (part./cc)                                                                           | <u>2.510 x 10<sup>-4</sup></u> part. concentration    |
| 9.1.12.3             | Upstream concentration (part./cc)                                                                             | <u>2.510 x 10<sup>-4</sup></u> part. concentration    |
| 9.1.12.4             | Challenge aerosol concentration between 2.00 x 10 <sup>6</sup> and 2.71 x 10 <sup>6</sup> part./cc            | <u>mm</u> Initials                                    |
| 9.1.12.5             | 1 <sup>st</sup> stage downstream concentration (part./cc)                                                     | <u>6.325 x 10<sup>-1</sup></u> part. concentration    |
| 9.1.12.6             | 2 <sup>nd</sup> /3 <sup>rd</sup> stage downstream concentration (part./cc)                                    | <u>3.531 x 10<sup>-2</sup></u> part. concentration    |
| 9.1.12.7             | 1 <sup>st</sup> stage Penetration $\leq 5.0 \times 10^{-4}$ (efficiency $\geq 99.95\%$ )                      | <u>2.517 x 10<sup>-5</sup></u>                        |
| 9.1.12.8             | 2 <sup>nd</sup> /3 <sup>rd</sup> stage Penetration $\leq 2.5 \times 10^{-7}$ (efficiency $\geq 99.999975\%$ ) | <u>5.628 x 10<sup>-9</sup></u>                        |
| 9.1.13.3<br>9.1.13.4 | Ensure all test port ball valves are closed and capped.                                                       | <u>mm</u> Initials <u>PT</u> Independent Verification |

| Valve     | Required Position | Initials  | Independent Verification |
|-----------|-------------------|-----------|--------------------------|
| HV-852-H  | Closed and Locked | <u>mm</u> | <u>PT</u>                |
| HV-852-G  | Closed            | <u>mm</u> | <u>PT</u>                |
| HV-852-F  | Closed            | <u>mm</u> | <u>PT</u>                |
| HV-852-D  | Closed            | <u>mm</u> | <u>PT</u>                |
| HV-852-C  | Closed            | <u>mm</u> | <u>PT</u>                |
| HV-852-B  | Closed            | <u>mm</u> | <u>PT</u>                |
| HV-852-A  | Closed            | <u>mm</u> | <u>PT</u>                |
| HV-852-AA | Closed            | <u>mm</u> | <u>PT</u>                |

Comments: Stop and Recorder 2352 2330 stop 9196 top top Key involved only  
checked. Recorder 2352 9113

Surveillance Personnel [Signature] Signature 06/03/08 Date OC On-duty Supervisor [Signature] Signature 06/03/08 Date

Notify CSE that complete and accepted surveillance is available for review.

System Engineer [Signature] Signature 6/11/08 Date

RECEIVED JUN 26 2008

## 100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

**ATTACHMENT B**  
**100 Area Glovebox Exhaust FF-853 Data Sheet**

Date: 06/11/08 (8.4.1) LAS Calibration Expiration Date: 05/11/08 (8.4.3) Diluter Calibration Expiration Date: 09/06/08 (8.4.4) Dilution Ratio: 5.9 (8.4.2)

| Step Number          | Item                                                                                                          | FF-853                                                 |
|----------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 9.2.12.2             | Background concentration (part./cc)                                                                           | $3.53 \times 10^{-3}$<br>part. concentration           |
| 9.2.12.3             | Upstream concentration (part./cc)                                                                             | $2.47 \times 10^{-4}$<br>part. concentration           |
| 9.2.12.4             | Challenge aerosol concentration between $2.00 \times 10^6$ and $2.71 \times 10^6$ part./cc)                   | <u>1.12</u><br>Initials                                |
| 9.2.12.5             | 1 <sup>st</sup> stage downstream concentration (part./cc)                                                     | $1.20 \times 10^{-2}$<br>part. concentration           |
| 9.2.12.6             | 2 <sup>nd</sup> /3 <sup>rd</sup> stage downstream concentration (part./cc)                                    | $1.165 \times 10^{-1}$<br>part. concentration          |
| 9.2.12.7             | 1 <sup>st</sup> stage Penetration $\leq 5.0 \times 10^{-4}$ (efficiency $\geq 99.95\%$ )                      | $4.866 \times 10^{-5}$                                 |
| 9.2.12.8             | 2 <sup>nd</sup> /3 <sup>rd</sup> stage Penetration $\leq 2.5 \times 10^{-7}$ (efficiency $\geq 99.999975\%$ ) | $4.514 \times 10^{-2}$                                 |
| 9.2.13.3<br>9.2.13.4 | Ensure all test port ball valves are closed and capped.                                                       | <u>MMT</u> Initials <u>PT</u> Independent Verification |

| Valve     | Required Position | Initials   | Independent Verification |
|-----------|-------------------|------------|--------------------------|
| HV-853-H  | Closed and Locked | <u>MMT</u> | <u>PT</u>                |
| HV-853-G  | Closed            | <u>MMT</u> | <u>PT</u>                |
| HV-853-F  | Closed            | <u>MMT</u> | <u>PT</u>                |
| HV-853-D  | Closed            | <u>MMT</u> | <u>PT</u>                |
| HV-853-C  | Closed            | <u>MMT</u> | <u>PT</u>                |
| HV-853-B  | Closed            | <u>MMT</u> | <u>PT</u>                |
| HV-853-A  | Closed            | <u>MMT</u> | <u>PT</u>                |
| HV-852-AA | Closed            | <u>MMT</u> | <u>PT</u>                |

Comments: Stop and recover at 215.5 Step 9.2.17 HV-853AA is intact  
should read HV-852-AA Recover at 2200 Step 9.2.17

Surveillance  
Personnel

Signature

Date

OC On-duty  
Supervisor

Signature

Date

**Notify CSE that complete and accepted surveillance is available for review.**

|                 |                    |                |
|-----------------|--------------------|----------------|
| System Engineer | <u>[Signature]</u> | <u>6/11/08</u> |
|                 | Signature          | Date           |

RECEIVED JUN 26 2008

## 2.3 Boilers and Heaters

### 2.3.4 Emissions Monitoring Requirements

- 2.3.4.1 Emission units TA-21-357-1, TA-21-357-2, and TA-21-357-3: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.
- 2.3.4.2 Emission units TA-55-6-BHW-1 and TA-55-6-BHW-2: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.
- 2.3.4.3 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

### Reporting Requirement

2.3.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes      Date report submitted:      Tracking Number:

☒ No      Provide comments and identify any supporting documentation as an attachment.

#### Comments:

- 2.3.4.1 The TA-21 Steam Plant was officially and permanently shut-down as of September 28, 2007. This information was communicated to NMED in a letter dated October 16, 2007.
- 2.3.4.2 Volumetric flow meters are utilized to measure the total amount of natural gas being used by units TA-55-6-BHW-1 and TA-55-6-BHW-2 on a monthly basis. Natural gas usage is summarized in **Attachment 3**.
- 2.3.4.3 LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

### Attachment 3 Boilers and Heaters Natural Gas Usage

#### 2008 Small Boilers Data Entry / Gas Use

| Data Entry | Metered Boilers                            |                |                               | Total Gas Use <sup>(a)</sup> |         | Non-Metered Gas Use | 12-Month Rolling Total for all Small Boilers (MMSCF) <sup>(a)</sup> |
|------------|--------------------------------------------|----------------|-------------------------------|------------------------------|---------|---------------------|---------------------------------------------------------------------|
|            | TA-55 Boiler Gas Use (MSCF) <sup>(c)</sup> |                | TA-50-2 <sup>(d)</sup> (MSCF) |                              |         |                     |                                                                     |
|            | BHW-1B (B-602)                             | BHW-2B (B-603) | BS-1                          | (MSCF)                       | (MMSCF) | (MMSCF)             |                                                                     |
|            | Month                                      |                |                               |                              |         |                     |                                                                     |
| January    | 3441                                       | 2              |                               | 84,295                       | 84.30   | 80.55               | 504.57                                                              |
| February   | 2075                                       | 8              |                               | 65,795                       | 65.80   | 63.71               | 504.27                                                              |
| March      | 1786                                       | 2              |                               | 58,027                       | 58.03   | 56.24               | 507.94                                                              |
| April      | 1175                                       | 951            |                               | 40,942                       | 40.94   | 38.52               | 504.67                                                              |
| May        | 528                                        | 989            |                               | 25,334                       | 25.33   | 26.52               | 503.54                                                              |
| June       | 505                                        | 1340           | 1.2                           | 17,402                       | 17.40   | 15.56               | 507.41                                                              |
| July       |                                            |                |                               |                              |         |                     |                                                                     |
| August     |                                            |                |                               |                              |         |                     |                                                                     |
| September  |                                            |                |                               |                              |         |                     |                                                                     |
| October    |                                            |                |                               |                              |         |                     |                                                                     |
| November   |                                            |                |                               |                              |         |                     |                                                                     |
| December   |                                            |                |                               |                              |         |                     |                                                                     |
| TOTAL      | 9510                                       | 3292           | 1.2                           | 294,793                      | 294.80  | 281.99              | Permit Limit = 870                                                  |

|                                              |       |                         |
|----------------------------------------------|-------|-------------------------|
| 2008 Non Metered Boiler Pool Capacity:       | 305.3 | MMBTU/hr <sup>(f)</sup> |
| Estimated Gas-Use per MMBtu rating Jan-June: | 0.92  | MMscf/MMBtu/hr          |
| Estimated Gas-Use per MMBtu rating July-Dec: | 0.00  | MMscf/MMBtu/hr          |
| Estimated Gas-Use per MMBtu - Annual         | 0.92  | MMscf/MMBtu/hr          |

Definitions: MMSCF= Million Standard Cubic Feet  
MSCF = Thousand Standard Cubic Feet  
Metered/Non-metered: Metered boilers are those units that have unit specific volumetric flow meters for the boiler(s) only.

| Gas Use Non-Metered <sup>(d)</sup> (MMSCF) |         |         |         |           |           |         |         |            |                      |
|--------------------------------------------|---------|---------|---------|-----------|-----------|---------|---------|------------|----------------------|
| AIRS Stack #                               | 016     | 016     | 017     | 018       | 019       | 020     | 021     | 024        | Units <sup>(h)</sup> |
| Location:                                  | TA-48-1 | TA-48-1 | TA-48-1 | TA-53-365 | TA-53-365 | TA-59-1 | TA-59-1 | TA-16-1484 | Lab Wide             |
| ID:                                        | BS-1    | BS-2    | BS-6    | BHW-1     | BHW-2     | BHW-1   | BHW-2   | Plant 5    | Various              |
| Design Rate <sup>(g)</sup> (MMBTU/hr)      | 5.336   | 5.335   | 7.140   | 7.115     | 7.115     | 5.335   | 5.335   | 12.700     | 250                  |
| Calculated Gas Use-Jan-June                | 4.929   | 4.928   | 6.595   | 6.571     | 6.571     | 4.928   | 4.928   | 11.731     | 230.513              |
| Calculated Gas Use-July-Dec                | 0.000   | 0.000   | 0.000   | 0.000     | 0.000     | 0.000   | 0.000   | 0.000      | 0.000                |
| Calculated Gas Use-Annual                  | 4.929   | 4.928   | 6.595   | 6.571     | 6.571     | 4.928   | 4.928   | 11.731     | 230.513              |

## 2.4 Carpenter Shops

### 2.4.4 Emissions Monitoring

2.4.4.1 The permittee shall maintain logs of the hours the carpenter shops are in operation.

### Reporting Requirement

2.4.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes

Date report submitted:

Tracking Number:

☒ No

Provide comments and identify any supporting documentation as an attachment.

#### Comments:

2.4.4.1 A log is maintained of the hours of operation for each of the carpenter shops. Hour readings are collected and recorded monthly from hour meters installed on each of the cyclone separators. Hours of operation are provided in **Attachment 4**.

**Attachment 4**  
**Carpenter Shop Hours of Operation**

**2008 TA-3 & TA-15 Carpenter Shops**

| <b>TA-3</b> | Data Entry                      | <b>TA-3</b>  | Data Entry                      |
|-------------|---------------------------------|--------------|---------------------------------|
|             | Hours of Operation <sup>1</sup> |              | Hours of Operation <sup>1</sup> |
| Month       | TA-3                            | Month        | TA-3                            |
| January     | 1.7                             | July         |                                 |
| February    | 1.0                             | August       |                                 |
| March       | 1.1                             | September    |                                 |
| April       | 3.3                             | October      |                                 |
| May         | 6.0                             | November     |                                 |
| June        | 3.7                             | December     |                                 |
| 6 mo. Total | 16.8                            | 6 mo. Total: | 0.0                             |

| <b>TA-15</b> | Data Entry                      | <b>TA-15</b> | Data Entry                      |
|--------------|---------------------------------|--------------|---------------------------------|
|              | Hours of Operation <sup>1</sup> |              | Hours of Operation <sup>1</sup> |
| Month        | TA-15                           | Month        | TA-15                           |
| January      | 7.6                             | July         |                                 |
| February     | 9.8                             | August       |                                 |
| March        | 8.3                             | September    |                                 |
| April        | 14.4                            | October      |                                 |
| May          | 5.2                             | November     |                                 |
| June         | 6.4                             | December     |                                 |
| 6 mo. Total  | 51.7                            | 6 mo. Total: | 0.0                             |

| Reference                                                                    |
|------------------------------------------------------------------------------|
| 1. Based on information provided monthly by the shop foreman from each shop. |

**Saws, drills, shaping and sanding equipment shall each not operate in excess of 4368 hours per year.**

## 2.5 Chemical Usage

### 2.5.4 Emissions Monitoring/Recordkeeping Requirements

2.5.4.1 Maintain records of chemical purchasing through facility-wide chemical tracking system, and use the data to calculate the emissions on a semiannual basis in accordance with Condition 4.1.

### Reporting Requirement

2.5.5 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes      **Date report submitted:**      **Tracking Number:**

☒ No      **Provide comments and identify any supporting documentation as an attachment.**

#### Comments:

2.5.4.1 Records of chemical purchases are maintained through LANL's facility wide chemical tracking system (ChemLog). The data is used to calculate emissions which are submitted in the Semi-Annual Emission Report.

## 2.6 Degreasers

### 2.6.4 Emissions Monitoring Requirements

2.6.4.1 Record the amount of solvent added to the degreaser and calculate the emissions on a semi-annual basis in accordance with Condition 4.1.

2.6.4.2 Complete checklist for work practice standards.

### Reporting Requirement

#### 2.6.6 Reporting

2.6.6.1 Submit notification of initial startup.

2.6.6.2 Submit a compliance report 150 days after initial startup.

2.6.6.3 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes

Date report submitted:

Tracking Number:

☒ No

Provide comments and identify any supporting documentation as an attachment.

#### Comments:

2.6.4.1 Records are maintained of the amount of solvent added to the degreaser. This data is used to calculate emissions on a semi-annual basis. The Semi-Annual Emissions Report, containing the degreaser emissions, will be submitted within 90 days from the end of the reporting period in accordance with condition 4.3 of the operating permit. LANL's "Historical Solvent Usage Data" report for January 1 through June 30, 2008 is provided in **Attachment 5**.

2.6.4.2 The degreaser operations staff completes checklists for work practice standards. The checklists are available on-site for NMED inspection.

**Attachment 5**  
**Degreaser Solvent Usage**

## Historical Solvent Usage Data

The usage information for TA-55-DG-1 degreaser from Jan-01-2008 through Jun-30-2008 is displayed below.

### General Degreaser Information

| Degreaser  | Type       | TA Building | Solvent           |
|------------|------------|-------------|-------------------|
| TA-55-DG-1 | Cold Batch | 55          | Trichloroethylene |

---

| Date Measured | Initial Solvent Level (inches) | Volume Added (liters) | Level Added (inches) | Volume Removed (liters) | Level Removed (inches) |
|---------------|--------------------------------|-----------------------|----------------------|-------------------------|------------------------|
| Jan-07-2008   | 6.00                           | 3.44                  | 1.75                 | 0.00                    | 0.00                   |
| Feb-21-2008   | 7.25                           | 0.00                  | 0.00                 | 14.25                   | 7.25                   |
| Feb-26-2008   | 0.00                           | 14.74                 | 7.50                 | 0.00                    | 0.00                   |
| Mar-31-2008   | 7.25                           | 0.00                  | 0.00                 | 0.00                    | 0.00                   |
| Apr-09-2008   | 7.25                           | 1.00                  | 0.50                 | 0.00                    | 0.00                   |
| Apr-29-2008   | 7.25                           | 2.00                  | 1.01                 | 0.00                    | 0.00                   |
| Apr-30-2008   | 7.75                           | 0.00                  | 0.00                 | 14.50                   | 7.37                   |
| May-01-2008   | 0.00                           | 14.50                 | 7.37                 | 0.00                    | 0.00                   |
| May-13-2008   | 7.25                           | 1.00                  | 0.50                 | 0.00                    | 0.00                   |
| May-28-2008   | 7.75                           | 0.00                  | 0.00                 | 0.00                    | 0.00                   |
| Jun-05-2008   | 7.50                           | 0.00                  | 0.00                 | 14.00                   | 7.11                   |
| Jun-10-2008   | 0.00                           | 14.74                 | 7.50                 | 0.00                    | 0.00                   |
| Jun-30-2008   | 7.25                           | 0.50                  | 0.25                 | 0.00                    | 0.00                   |

## 2.7 Internal Combustion Sources

### 2.7.4 Emissions Monitoring Requirements

| Source                        | Monitoring Required                                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Stationary Standby Generators | Track and record hours of operation for stationary standby generators on a semi-annual basis.                                  |
| TA-33-G-1                     | Track hourly and 12-month rolling total kWh.<br><br>Record hours of operation and the time operation begins and ends each day. |

2.7.4.1 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

### Reporting Requirement

2.7.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes

Date report submitted:

Tracking Number:

☒ No

Provide comments and identify any supporting documentation as an attachment.

#### Comments:

2.7.4 (Stationary Standby Generators) - LANL tracks and records generator hours of operation on a semi-annual basis. Stationary generator hours of operation for this reporting period are provided in **Attachment 6**.

2.7.4 (TA-33-G-1) - NSR Air Quality Permit 2195-F-R3 was issued on May 28, 2008. This revision included a change to the kilowatt-hour (kWh) monitoring for the generator. The new condition, 4.a., reads: "The permittee shall record the kilowatt-hours produced by Unit TA-33-G-1 on a daily basis and on a monthly rolling 12-month total basis." A kWh tracking form has been created and will be used for tracking generator start and stop times as well as daily kWh. These daily readings will be used in tracking the 12-month rolling kWh total. These records are available on-site for NMED inspection. This change has also been requested as part of our Operating Permit Renewal Application submitted earlier this year.

2.7.4.1 LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine opacity compliance.

## Attachment 6 Internal Combustion Generator Hours of Operation

### 2008 Generator Hours

| TA                   | Blgd | Manufacturer   | MODEL             | KW   | Fuel Type | Previous Reading Date | Previous Reading | First 6 Month Readings |         |           | Second 6 Month Readings |         |           |
|----------------------|------|----------------|-------------------|------|-----------|-----------------------|------------------|------------------------|---------|-----------|-------------------------|---------|-----------|
|                      |      |                |                   |      |           |                       |                  | 6 Month Reading Date   | Reading | Hours Run | 12 Month Reading Date   | Reading | Hours Run |
| 3                    | 40   | Onan Sons      | 1500DVE15R313748  | 150  | Diesel    | Dec-08                | 6.6              | Jun-08                 | 11.8    | 5.2       | Dec-08                  |         |           |
| 3                    | 223  | Onan Sons      | 45.OEM-16R/10742D | 45   | Propane   | Dec-08                | 489.5            | Jun-08                 | 492.5   | 3.0       | Dec-08                  |         |           |
| 3                    | 440  | Cummins        | 500FDR5051        | 280  | Diesel    | Dec-08                | 121.8            | Jun-08                 | 121.8   | 0.0       | Dec-08                  |         |           |
| 3                    | 440  | Cummins        | DFGA-5005210      | 500  | Diesel    | Dec-08                | 81.8             | Jun-08                 | 93.8    | 12.0      | Dec-08                  |         |           |
| 3                    | 1076 | Cummins        | DGBB-5801289      | 35   | Diesel    | Dec-08                | 129.7            | Jun-08                 | 141.2   | 11.5      | Dec-08                  |         |           |
| 3                    | 1400 | Cummins        | DFEH-5559516      | 400  | Diesel    | Dec-08                | 33.0             | Jun-08                 | 37      | 4.0       | Dec-08                  |         |           |
| 3                    | 1404 | Cummins        | DFLC-5554001      | 1250 | Diesel    | Dec-08                | 338.5            | Jun-08                 | 368.4   | 31.9      | Dec-08                  |         |           |
| 3                    | 1498 | Caterpillar    | SR-4              | 600  | Diesel    | Dec-08                | 326.0            | Jun-08                 | 331.0   | 5.0       | Dec-08                  |         |           |
| 3                    | 2522 | Onan Sons      | DGDA-6005757      | 50   | Diesel    | Dec-08                | 339.8            | Jun-08                 | 352     | 12.2      | Dec-08                  |         |           |
| 18                   | 980  | Cummins        | KTA50-G2          | 1100 | Diesel    | Dec-08                | 293.4            | Jun-08                 | 305.2   | 11.8      | Dec-08                  |         |           |
| 18                   | 1374 | Onan Sons      | 60ENA             | 60   | Nat. Gas  | Dec-08                | 1092.9           | Jun-08                 | 1115.8  | 22.9      | Dec-08                  |         |           |
| 18                   | 31   | Onan Sons      | 275DFML29507H     | 275  | Diesel    | Dec-08                | 180.8            | Jun-08                 | 180.8   | 0.0       | Dec-08                  |         |           |
| 35                   | 2    | Onan Sons      | 1000GDB           | 100  | Diesel    | Dec-08                | 115.5            | Jun-08                 | 115.5   | 0.0       | Dec-08                  |         |           |
| 35                   | 402  | Cummins        | DGCB-5674244      | 60   | Diesel    | Dec-08                | 138.4            | Jun-08                 | 158.0   | 19.6      | Dec-08                  |         |           |
| 43                   | 1    | Cummins        | 4BT3.9-GC         | 50   | Diesel    | Dec-08                | 383.9            | Jun-08                 | 387.7   | 3.8       | Dec-08                  |         |           |
| 43                   | 1    | Onan Sons      | DVE               | 150  | Diesel    | Dec-08                | 620.0            | Jun-08                 | 644.4   | 24.4      | Dec-08                  |         |           |
| 46                   | 335  | Onan Sons      | 300DEFCB          | 300  | Diesel    | Dec-08                | 959.5            | Jun-08                 | 995.4   | 35.9      | Dec-08                  |         |           |
| 48                   | 45   | Onan Sons      | DFCB-5740130      | 300  | Diesel    | Dec-08                | 53.5             | Jun-08                 | 69.5    | 16.0      | Dec-08                  |         |           |
| 50                   | 37   | Cummins        | 660FDR5059FF      | 500  | Diesel    | Dec-08                | 502.9            | Jun-08                 | 502.9   | 0.0       | Dec-08                  |         |           |
| 50                   | 184  | Onan Sons      | DGFA-568741       | 150  | Diesel    | Dec-08                | 212.7            | Jun-08                 | 238.6   | 25.9      | Dec-08                  |         |           |
| 50                   | 188  | Onan Sons      | L940563879        | 1250 | Diesel    | Dec-08                | 149.0            | Jun-08                 | 149.0   | 0.0       | Dec-08                  |         |           |
| 53                   | 1    | Onan Sons      | 60ENA             | 60   | Nat. Gas  | Dec-08                | 1234.1           | Jun-08                 | 1261.2  | 27.1      | Dec-08                  |         |           |
| 53                   | 2    | Kato Eng.      | Kamag-14          | 50   | Diesel    | Dec-08                | 194.3            | Jun-08                 | 194.3   | 0.0       | Dec-08                  |         |           |
| 53                   | 3N   | Onan           | 15.0JC-18R        | 15   | Propane   | Jun-08                | 345.3            | Jun-08                 | 345.3   | 0.0       | Dec-08                  |         |           |
| 54                   | 412  | Olympian       | 95M-07374-F       | 500  | Diesel    | Dec-08                | 317.9            | Jun-08                 | 324.7   | 6.8       | Dec-08                  |         |           |
| 55                   | 5    | Kohler         | 100RZ71           | 100  | Propane   | Dec-08                | 79.3             | Jun-08                 | 93.4    | 14.1      | Dec-08                  |         |           |
| 55                   | 8    | Delco/Detroit  | E7014DD           | 600  | Diesel    | Dec-08                | 822.2            | Jun-08                 | 831.8   | 9.6       | Dec-08                  |         |           |
| 55                   | 364  | Onan Sons      | 1250DFLC-4987     | 1250 | Diesel    | Dec-08                | 82.8             | Jun-08                 | 101.3   | 18.5      | Dec-08                  |         |           |
| 55                   | 25   | Onan Sons      | 40DL8T            | 40   | Diesel    | Dec-08                | 66.5             | Jul-08                 | 72.4    | 5.9       | Dec-08                  |         |           |
| 55                   | 47   | Onan Sons      | 1465              | 200  | Diesel    | Dec-08                | 540.0            | Jul-08                 | 555.5   | 15.5      | Dec-08                  |         |           |
| 55                   | 142  | Cummins        | DFEB-4963414      | 400  | Diesel    | Dec-08                | 105.0            | Jul-08                 | 114.8   | 9.8       | Dec-08                  |         |           |
| 59                   | 1    | Allis Chalmers | 2594-0703         | 90   | Diesel    | Dec-08                | 750.0            | Jul-08                 | 750.0   | 0.0       | Dec-08                  |         |           |
| 60                   | yard | Cummins        | DFHD-4964979      | 1000 | Diesel    | Dec-08                | 648.4            | Jun-08                 | 649.4   | 1.0       | Dec-08                  |         |           |
| 63                   | 93   | Murphy         | 3166-0084         | 30   | Diesel    | Dec-08                | 716.0            | Jul-08                 | 716.0   | 0.0       | Dec-08                  |         |           |
| 64                   | 1    | Onan Sons      | 250DVG            | 250  | Diesel    | Dec-08                | 166.9            | Jul-08                 | 171.8   | 4.9       | Dec-08                  |         |           |
| 69                   | 33   | Cummins        | DFLC-5558730      | 1250 | Diesel    | Dec-08                | 71.3             | Jul-08                 | 78.6    | 7.3       | Dec-08                  |         |           |
| 36 Generators in use |      |                |                   |      |           |                       |                  |                        |         | TOTAL     | 365.6                   | TOTAL   | 0.0       |

N/R = Not Read

|                                   |      |                                    |
|-----------------------------------|------|------------------------------------|
| First half average hours per unit | 10.2 | Second half average hours per unit |
|-----------------------------------|------|------------------------------------|

## 2.8 Data Disintegrator

### 2.8.4 Emissions Monitoring

- 2.8.4.1 The permittee shall maintain a log of the number of boxes of media that are destroyed and calculate the emissions on a semiannual basis in accordance with Condition 4.1. This condition is pursuant to 20.2.70.302.C NMAC.
- 2.8.4.2 The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer's recommendations. This condition was brought forward from NSR Permit No. 2195H Condition 1.d.

### Reporting Requirement

2.8.6 Report shall be submitted in accordance with conditions 4.1 and 4.2.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes

Date report submitted:

Tracking Number:

☒ No

Provide comments and identify any supporting documentation as an attachment.

#### Comments:

- 2.8.4.1 LANL maintains a log of the number of boxes of media that are shredded and calculates the emissions on a semi-annual basis. The actual number of boxes shredded during this reporting period is included in **Attachment 7**.
- 2.8.4.2 The Data Disintegrator and associated pollution control devices are maintained under a preventative maintenance contract. LANL maintains documentation of all maintenance and repairs performed on the cyclone and cloth tube filters. This documentation is available on-site for NMED inspection.

**Attachment 7**  
**Data Disintegrator Box Throughput**

**2008 TA-52 Data Disintegrator**

| Data Entry    |                                  | Data Entry   |                                  |
|---------------|----------------------------------|--------------|----------------------------------|
| Month         | Boxes <sup>(c)</sup><br>Shredded | Month        | Boxes <sup>(c)</sup><br>Shredded |
| January       | 876                              | July         |                                  |
| February      | 761                              | August       |                                  |
| March         | 840                              | September    |                                  |
| April         | 657                              | October      |                                  |
| May           | 837                              | November     |                                  |
| June          | 567                              | December     |                                  |
| 6 mo. Total:  | 4,538                            | 6 mo. Total: | 0                                |
| Annual Boxes: |                                  | 4,538        |                                  |

## 2.9 Power Plant at Technical Area 3 (TA-3-22)

- 2.9.4.1 Total fuel oil consumption shall be monitored so that combined fuel oil usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.a.
- 2.9.4.2 Natural gas consumption shall be monitored so that combined natural gas usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.b.
- 2.9.4.3 Natural gas consumption shall be monitored so that natural gas usage for Unit TA-3-22 CT-1 can be calculated on a rolling 365-day total. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.f.
- 2.9.4.4 A certification of total sulfur content of the No. 2 fuel oil used by Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 shall be obtained from the supplier whenever No. 2 fuel oil is delivered to the facility. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.c.
- 2.9.4.5 If the certification as specified by Condition 2.9.4.4 is not available at delivery, the permittee shall analyze the No. 2 fuel oil to determine the total sulfur content. The analysis shall be conducted using Department approved methods and standards for determining total sulfur content of No. 2 fuel oil. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.d.
- 2.9.4.6 The operating load of Unit TA-3-22 CT-1 specified by Condition 2.9.3.7 shall be monitored and recorded hourly during normal operations of that unit. Periods of startup and shutdown shall not be included in the hourly monitoring but shall be recorded separately. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.e.
- 2.9.4.7 Compliance with NOx pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit) and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8. Compliance with NOx annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit). This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.g.
- 2.9.4.8 Compliance with CO pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.731 pounds CO per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit), and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8). Compliance with CO annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.0613 pounds CO per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit). This condition was brought forward from NSR Permit No.

- 2.9.4.9 At least once each calendar quarter the permittee shall use the method specified in Conditions 2.9.4.7 and 2.9.4.8 to determine compliance of Unit TA-3-22 CT-1 with the hourly and annual emission limits specified in this permit. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.i.
- 2.9.4.10 Visible emissions from stationary combustion equipment shall not equal or exceed an opacity of 20%. Use of pipeline quality natural gas fuel as defined in Conditions 2.9.3.1 and 2.9.3.4 constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20%. At such time as No. 2 fuel oil as defined in Condition 2.9.3.1 is used, opacity shall be measured in accordance with the procedures at 40 CFR 60, Appendix A, Method 9. Opacity measurements shall continue on a quarterly basis per calendar year for each effected unit until such time as pipeline quality natural gas is used. This condition is pursuant to 20.2.61 NMAC and NSR Permit No. 2195BM1, Condition 2.c.
- 2.9.4.11 Initial compliance tests are required on Unit TA-3-22 CT-1 for NO<sub>x</sub> and CO. These tests shall be conducted within sixty (60) days after the unit achieves the maximum normal production. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source. The tests shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 7E for NO<sub>x</sub>, and Method 10 for CO contained in CFR Title 40, Part 60, Appendix A, and with the requirements of Subpart A, General Provisions, 60.8(f). Alternative test method(s) may be used if the Department approves the change. The permittee shall submit a testing protocol to the Department at least thirty (30) days prior to the test date, and provide notification to the Department at least thirty (30) days prior to the test date. This condition was brought forward from NSR Permit No. 2195BM1, Condition 6.b and General Condition 13.
- 2.9.4.12 The permittee shall comply with fuel sulfur monitoring requirements at 40 CFR 60.334(h) applicable to Unit TA-3-22 CT-1 by making the required demonstration which shows the fuel combusted in the turbine meets the definition of natural gas at 40 CFR 60.331(u).

The conditions of Section 2.9.4 are pursuant to 20.2.70.302.C NMAC.

### Reporting Requirement

- 2.9.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

This condition is pursuant to 20.2.60.302.E NMAC.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes

Date report submitted:

Tracking Number:

☒ No

Provide comments and identify any supporting documentation as an attachment.

**Comments:**

- 2.9.4.1 Total fuel oil consumption is monitored on a daily basis. These daily readings are used to calculate a 365-day rolling total. **Attachment 8** contains a summary of monthly fuel oil consumption. Records of daily fuel oil use are available on-site for NMED inspection.
- 2.9.4.2 A volumetric flow meter is used to measure the total amount of natural gas used on a daily basis. These daily readings are used to calculate a 365-day rolling total. **Attachment 8** contains a summary of monthly natural gas usage. Daily totals are available on-site for NMED inspection.
- 2.9.4.3 The Combustion Turbine started operation on September 23, 2007. A monthly gas consumption report, containing daily turbine gas use, is generated by the plant operator. This data is used to calculate a rolling 365-day total. See **Attachment 9** for the daily and rolling 365-day totals.
- 2.9.4.4 No fuel oil was purchased or delivered during this reporting period.
- 2.9.4.5 No fuel oil was purchased or delivered during this reporting period.
- 2.9.4.6 A tracking log was created that contains the hours of start-up, normal operation, shut-down, and the hourly operating load during normal operation. The turbine did not achieve "normal" operation during this reporting period. The combustion turbine has run less than 12 hours for this reporting period due to equipment problems. The tracking logs are available on-site for NMED inspection.
- 2.9.4.7 An emission calculation spreadsheet was created, using the formula in this permit condition, to calculate the NOx pound per hour and ton per year emission rates. This data is compared with the permit emission limits.
- 2.9.4.8 An emission calculation spreadsheet was created, using the formula in this permit condition, to calculate the CO pound per hour and ton per year emission rates. This data is compared with the permit emission limits.
- 2.9.4.9 Daily gas use data is entered into the above mentioned spreadsheet on a monthly basis. The spreadsheet uses the required calculation to provide both NOx and CO hourly and annual emissions. The resulting data is used to determine compliance with emission limits.
- 2.9.4.10 LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation. Delivery of pipeline quality natural gas is specified in the transportation contract with the supplier. Opacity measurements performed at the Power Plant are provided in **Attachment 10**.
- 2.9.4.11 An initial compliance test was performed on the combustion turbine within 60 days following the unit achieving maximum normal production. The unit achieved its maximum normal production rate on September 27, 2007, and the compliance test was performed on October 5, 2007. The test report was provided to NMED on October 22, 2007. The test consisted of the EPA test methods identified in this permit condition.

2.9.4.12 The natural gas used by the combustion turbine meets the definition of natural gas in 60.331(u). The sulfur monitoring requirement is met under 40 CFR 60.334(h)(3)(i), which allows the use of a current and valid transportation contract that specifies the maximum total sulfur content is 20 grains per 100 scf or less. The transportation contract specifies a sulfur content not to exceed 2 grains of total sulfur per 100 scf. A copy of the transportation contract is available at the facility.

**Attachment 8**  
**Power Plant Natural Gas and Fuel Oil Usage**

**TA-3 Power Plant Fuel Use Totals 2008 (Data Entry)**

|                | DATA ENTRY                                                                         |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 | Monthly Totals                  |  |
|----------------|------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|--|
|                | TA-3-22 Power Plant <sup>b</sup><br>Boiler # 1 (Edgemoor Iron Works, 210 MMBTU/hr) |                                 | TA-3-22 Power Plant <sup>b</sup><br>Boiler # 2 (Edgemoor Iron Works, 210 MMBTU/hr) |                                 | TA-3-22 Power Plant <sup>b</sup><br>Boiler # 3 (Union Iron Works, 210 MMBTU/hr) |                                 |                                 |                                 |  |
| Month          | Natural Gas (MCF) <sup>a</sup>                                                     | Fuel Oil (gallons) <sup>a</sup> | Natural Gas (MCF) <sup>a</sup>                                                     | Fuel Oil (gallons) <sup>a</sup> | Natural Gas (MCF) <sup>a</sup>                                                  | Fuel Oil (gallons) <sup>a</sup> | Natural Gas (MMCF) <sup>a</sup> | Fuel Oil (gallons) <sup>a</sup> |  |
| January        | 6,912                                                                              | 328                             | 63,171                                                                             | 0                               | 1,108                                                                           | 0                               | 71.191                          | 328                             |  |
| February       | 19,497                                                                             | 493                             | 34,960                                                                             | 0                               | 3,618                                                                           | 0                               | 58.075                          | 493                             |  |
| March          | 617                                                                                | 603                             | 50,578                                                                             | 0                               | 866                                                                             | 384                             | 52.061                          | 987                             |  |
| April          | 0                                                                                  | 0                               | 37,023                                                                             | 219                             | 4,276                                                                           | 0                               | 41.299                          | 219                             |  |
| May            | 0                                                                                  | 0                               | 23,792                                                                             | 0                               | 7,242                                                                           | 331                             | 31.034                          | 331                             |  |
| June           | 148                                                                                | 55                              | 11,048                                                                             | 0                               | 9,920                                                                           | 0                               | 21.116                          | 55                              |  |
| July           |                                                                                    |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 |                                 |  |
| August         |                                                                                    |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 |                                 |  |
| September      |                                                                                    |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 |                                 |  |
| October        |                                                                                    |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 |                                 |  |
| November       |                                                                                    |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 |                                 |  |
| December       |                                                                                    |                                 |                                                                                    |                                 |                                                                                 |                                 |                                 |                                 |  |
| Annual Totals: | 27,174                                                                             | 1,479                           | 220,572                                                                            | 219                             | 27,030                                                                          | 715                             | 274.776                         | 2413                            |  |
| Jan. - June    | 27,174                                                                             | 1,479                           | 220,572                                                                            | 219                             | 27,030                                                                          | 715                             | 274.776                         | 2413                            |  |
| July - Dec.    | 0                                                                                  | 0                               | 0                                                                                  | 0                               | 0                                                                               | 0                               | 0.000                           | 0                               |  |

# **Attachment 9** **Daily and Rolling 365-Day Gas Use Totals**

| 2008 Daily Turbine Gas Use (MCF), 365 Day Rolling Total Gas Use, & Hours of Operation |         |       |         |       |         |                      |         |       |         |       |         |                 |         |       |         |       |         |       |         |       |         |       |         |       |  |
|---------------------------------------------------------------------------------------|---------|-------|---------|-------|---------|----------------------|---------|-------|---------|-------|---------|-----------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|--|
| Day                                                                                   | Jan     |       | Feb     |       | Mar     |                      | Apr     |       | May     |       | Jun     |                 | Jul     |       | Aug     |       | Sep     |       | Oct     |       | Nov     |       | Dec     |       |  |
|                                                                                       | Gas Use | Hours | Gas Use | Hours | Gas Use | Hours                | Gas Use | Hours | Gas Use | Hours | Gas Use | Hours           | Gas Use | Hours | Gas Use | Hours | Gas Use | Hours | Gas Use | Hours | Gas Use | Hours | Gas Use | Hours |  |
| 1                                                                                     | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               |         |       |         |       |         |       |         |       |         |       |         |       |  |
| 2                                                                                     | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               |         |       |         |       |         |       |         |       |         |       |         |       |  |
| 3                                                                                     | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               |         |       |         |       |         |       |         |       |         |       |         |       |  |
| 4                                                                                     | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 42              | 1       |       |         |       |         |       |         |       |         |       |         |       |  |
| 5                                                                                     | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 70              | 0.75    |       |         |       |         |       |         |       |         |       |         |       |  |
| 6                                                                                     | 0       | 0     | 0       | 0     | 8       | 0.75                 | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 7                                                                                     | 0       | 0     | 0       | 0     | 5       | 0.5                  | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 8                                                                                     | 0       | 0     | 0       | 0     | 16      | 1.1                  | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 9                                                                                     | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 10                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 11                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 12                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 13                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 14                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 5     | 0.5     | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 15                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 110     | 2.5   | 0       | 0               |         |       |         |       |         |       |         |       |         |       |         |       |  |
| 16                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 17                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 18                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 19                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 301             | 2.3     |       |         |       |         |       |         |       |         |       |         |       |  |
| 20                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 21                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 22                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 23                                                                                    | 7       | 1     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 24                                                                                    | 3       | 1.5   | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 25                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 26                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 27                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 28                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 29                                                                                    | 0       | 0     | 0       | 0     | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 30                                                                                    | 0       | 0     |         |       | 0       | 0                    | 0       | 0     | 0       | 0     | 0       | 0               | 0       |       |         |       |         |       |         |       |         |       |         |       |  |
| 31                                                                                    | 0       | 0     |         |       | 0       | 0                    |         |       | 0       | 0     |         |                 |         |       |         |       |         |       |         |       |         |       |         |       |  |
| SUM                                                                                   | 10      | 2.5   | 0       | 0     | 29      | 2.35                 | 0       | 0     | 115     | 3     | 413     | 4.05            | 0       | 0     | 0       | 0     | 0       | 0     | 0       | 0     | 0       | 0     | 0       | 0     |  |
| First Half Gas Use:                                                                   |         | 567   |         | MCF   |         | Second Half Gas Use: |         | 0     |         | MCF   |         | Annual Gas Use: |         | 567   |         | MCF   |         |       |         |       |         |       |         |       |  |

The SCFH value (fuel flow rate) in the cell equation is from the compliance test report (223620 SCFH or 223.6 MSCFH)

365 day rolling total: **6875** MCF  
**6.875** MMSCF  
 Permit Limit (365 day rolling total): **646** MMSCF

**Attachment 10**  
**Power Plant Opacity Reports**

**Summary Table, Reports Attached**

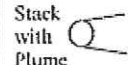
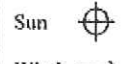

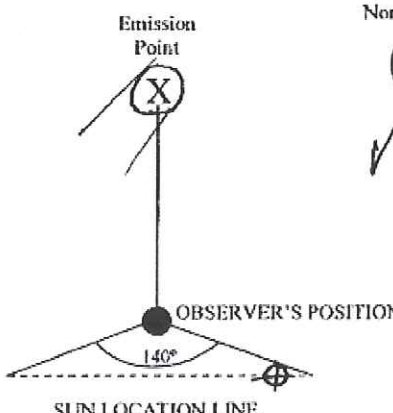
| <b>Source</b>       | <b>Date</b> | <b>Time</b> | <b>Average Opacity <sup>(a)</sup></b> |
|---------------------|-------------|-------------|---------------------------------------|
| TA-3-22 Power Plant | 01-15-08    | 10:00 am    | 0.25%                                 |
|                     | 02-12-08    | 11:00 am    | 0%                                    |
|                     | 03-04-08    | 11:13 am    | 0%                                    |
|                     | 03-04-08    | 11:47 am    | 0%                                    |
|                     | 03-18-08    | 11:33 am    | 0%                                    |
|                     | 03-25-08    | 09:56 am    | 0%                                    |
|                     | 04-15-08    | 10:20 am    | 0.75%                                 |
|                     | 04-15-08    | 10:42 am    | 0.875%                                |
|                     | 05-14-08    | 08:44 am    | 0%                                    |
|                     | 05-14-08    | 10:03 am    | 0%                                    |
|                     | 05-22-08    | 10:14am     | 0%                                    |
|                     | June 2008   | N/A         | <sup>(b)</sup>                        |

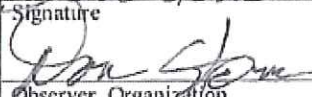
(a) Average opacity for the Power Plant is the sum of the highest consecutive 40 readings divided by 40 (10 minutes of readings). The method is in accordance with EPA Method 9 and 20.2.61 NMAC.

(b) There were no visible emission observations taken in June due to boiler certifications.

**LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)**

|                                                                                                                                                                                                                                       |                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>Power Plant at TA-3</b>                                                                                                                                                                                            |                                                                                                                                                                                |
| Source Location:<br><b>TA-3-22</b>                                                                                                                                                                                                    |                                                                                                                                                                                |
| Type of Source<br><b>Boiler # 1</b>                                                                                                                                                                                                   | Type of Control Equipment<br><b>No Particulate Control</b>                                                                                                                     |
| Describe Emission Point (Top of stack, etc.)<br><b>TOP OF Boiler #1 stack</b>                                                                                                                                                         |                                                                                                                                                                                |
| Height Above Ground Level<br><b>150</b> Feet                                                                                                                                                                                          | Height Relative to Observer<br><b>140</b> Feet                                                                                                                                 |
| Distance From Observer<br><b>200</b> Feet                                                                                                                                                                                             | Direction of Source From Observer<br><b>ENE</b>                                                                                                                                |
| Description of Plume (stack exit only)<br><input checked="" type="checkbox"/> Lofting <input type="checkbox"/> Trapping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input type="checkbox"/> No Plume Present |                                                                                                                                                                                |
| Emission Color<br><b>Black</b>                                                                                                                                                                                                        | Plume Type <input type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input checked="" type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                           |                                                                                                                                                                                |
| At what point in the plume was opacity determined?<br><b>1 ft. Above top of stack</b>                                                                                                                                                 |                                                                                                                                                                                |
| Describe Background (i.e. blue sky, trees, etc.)<br><b>Blue sky</b>                                                                                                                                                                   |                                                                                                                                                                                |
| Background Color<br><b>Blue</b>                                                                                                                                                                                                       | Sky Conditions<br><b>Clear</b>                                                                                                                                                 |
| Wind Speed<br><b>2-5</b> mph                                                                                                                                                                                                          | Wind Direction<br>(provide from/to, i.e. from North to South)<br><b>From NE</b>                                                                                                |
| Ambient Temperature<br><b>25</b> °F                                                                                                                                                                                                   | Relative Humidity<br><b>42</b> %                                                                                                                                               |
| Additional Comments/Information:<br><b>Fuel Oil burn exercise</b>                                                                                                                                                                     |                                                                                                                                                                                |

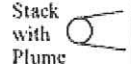
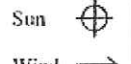

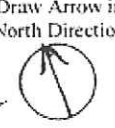
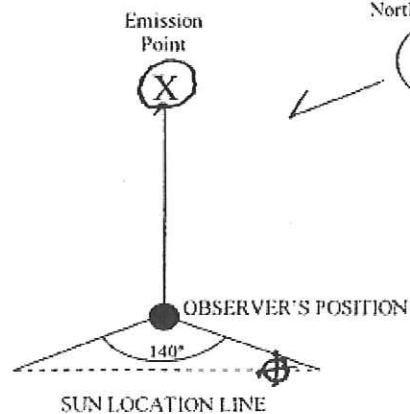
|                                                                                                                                                                                                                                                                                                      |                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Stack with Plume<br><br>Sun<br><br>Wind<br> | <b>SOURCE LAYOUT SKETCH</b><br> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

|                                                                                                 |                                                               |                         |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------|
| Observation Date<br><b>1-15-08</b>                                                              | Start Time<br><b>1000</b>                                     | End Time<br><b>1010</b> |
| Min                                                                                             | Sec                                                           | 0   15   30   45        |
| 1                                                                                               |                                                               | 0   0   0   0           |
| 2                                                                                               |                                                               | 0   0   0   0           |
| 3                                                                                               |                                                               | 0   0   0   0           |
| 4                                                                                               |                                                               | 0   0   5   5           |
| 5                                                                                               |                                                               | 0   0   0   0           |
| 6                                                                                               |                                                               | 0   0   0   0           |
| 7                                                                                               |                                                               | 0   0   0   0           |
| 8                                                                                               |                                                               | 0   0   0   0           |
| 9                                                                                               |                                                               | 0   0   0   0           |
| 10                                                                                              |                                                               | 0   0   0   0           |
| 11                                                                                              |                                                               |                         |
| 12                                                                                              |                                                               |                         |
| 13                                                                                              |                                                               |                         |
| 14                                                                                              |                                                               |                         |
| 15                                                                                              |                                                               |                         |
| 16                                                                                              |                                                               |                         |
| 17                                                                                              |                                                               |                         |
| 18                                                                                              |                                                               |                         |
| 19                                                                                              |                                                               |                         |
| 20                                                                                              |                                                               |                         |
| Average 10-Minute Opacity<br><b>0.25 %</b>                                                      | Range of Opacity Readings<br>Min. <b>0 %</b> Max. <b>50 %</b> |                         |
| OBSERVER (please print)<br>Name: <b>Don Stone</b> Title: <b>Engineer</b>                        |                                                               |                         |
| Signature:  |                                                               | Date: <b>1-15-08</b>    |
| Observer Organization<br><b>KSL</b>                                                             |                                                               |                         |
| Certified by<br><b>ETA</b>                                                                      | Certification Date<br><b>8-29-07</b>                          |                         |

ENV-EAQ-307, R3, ATTACHMENT 3 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

**LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)**

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>Power Plant at TA-3</b>                                                                                                                                                                                                                             |                                                                                                                                                                                |
| Source Location:<br><b>TA-3-22</b>                                                                                                                                                                                                                                     |                                                                                                                                                                                |
| Type of Source<br><b>Boiler # 1</b>                                                                                                                                                                                                                                    | Type of Control Equipment<br><b>No Particulate Control</b>                                                                                                                     |
| Describe Emission Point (Top of stack, etc.)<br><b>Top of Boiler #1 stack</b>                                                                                                                                                                                          |                                                                                                                                                                                |
| Height Above Ground Level<br><b>150 Feet</b>                                                                                                                                                                                                                           | Height Relative to Observer<br><b>140 Feet</b>                                                                                                                                 |
| Distance From Observer<br><b>70 Yards</b>                                                                                                                                                                                                                              | Direction of Source From Observer<br><b>NW-ENE</b>                                                                                                                             |
| Description of Plume (stack exit only)<br><input type="checkbox"/> Lofting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                |
| Emission Color<br><b>NO emission</b>                                                                                                                                                                                                                                   | Plume Type <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                            |                                                                                                                                                                                |
| At what point in the plume was opacity determined?<br><b>1 ft above top of stack</b>                                                                                                                                                                                   |                                                                                                                                                                                |
| Describe Background (i.e. blue sky, trees, etc.)<br><b>Blue sky</b>                                                                                                                                                                                                    |                                                                                                                                                                                |
| Background Color<br><b>Blue</b>                                                                                                                                                                                                                                        | Sky Conditions<br><b>Clear</b>                                                                                                                                                 |
| Wind Speed<br><b>2-4 mph</b>                                                                                                                                                                                                                                           | Wind Direction<br>(provide from/to, i.e. from North to South)<br><b>from E</b>                                                                                                 |
| Ambient Temperature<br><b>37 °F</b>                                                                                                                                                                                                                                    | Relative Humidity<br><b>50 %</b>                                                                                                                                               |
| Additional Comments/Information:<br><b>Fuel Oil Burn Exercises</b>                                                                                                                                                                                                     |                                                                                                                                                                                |

|                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SOURCE LAYOUT SKETCH</b>                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                          |
| Stack with Plume <br>Sun <br>Wind  | Draw Arrow in North Direction <br> |

| Observation Date<br><b>2-12-08</b>                                       |     | Start Time<br><b>1100</b> |    | End Time<br><b>1110</b>                                      |    |          |
|--------------------------------------------------------------------------|-----|---------------------------|----|--------------------------------------------------------------|----|----------|
| Min                                                                      | Sec | 0                         | 15 | 30                                                           | 45 | Comments |
|                                                                          |     |                           |    |                                                              |    |          |
| 1                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 2                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 3                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 4                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 5                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 6                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 7                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 8                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 9                                                                        |     | 0                         | 0  | 0                                                            | 0  |          |
| 10                                                                       |     | 0                         | 0  | 0                                                            | 0  |          |
| 11                                                                       |     |                           |    |                                                              |    |          |
| 12                                                                       |     |                           |    |                                                              |    |          |
| 13                                                                       |     |                           |    |                                                              |    |          |
| 14                                                                       |     |                           |    |                                                              |    |          |
| 15                                                                       |     |                           |    |                                                              |    |          |
| 16                                                                       |     |                           |    |                                                              |    |          |
| 17                                                                       |     |                           |    |                                                              |    |          |
| 18                                                                       |     |                           |    |                                                              |    |          |
| 19                                                                       |     |                           |    |                                                              |    |          |
| 20                                                                       |     |                           |    |                                                              |    |          |
| Average 10-Minute Opacity<br><b>0 %</b>                                  |     |                           |    | Range of Opacity Readings<br>Min. <b>0 %</b> Max. <b>0 %</b> |    |          |
| OBSERVER (please print)<br>Name: <b>Don Stone</b> Title: <b>Engineer</b> |     |                           |    |                                                              |    |          |
| Signature: <b>Don Stone</b>                                              |     |                           |    | Date: <b>2-12-08</b>                                         |    |          |
| Observer Organization: <b>KSL</b>                                        |     |                           |    |                                                              |    |          |
| Certified by: <b>ETA</b>                                                 |     |                           |    | Certification Date: <b>8-29-07</b>                           |    |          |

ENV-EAQ-307, R3, ATTACHMENT 3 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)



LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: **TA-3-22 Power Plant**

Source Location: **TA-3-22**

Type of Source: **Boiler #1** Type of Control Equipment: **No Particulate Control**

Describe Emission Point (Top of stack, etc.): **Top of boiler #1 stack**

Height Above Ground Level: **150 Feet** Height Relative to Observer: **140 Feet**

Distance From Observer: **200 Feet** Direction of Source From Observer: **ENE**

Description of Plume (stack exit only)  
☐ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning  
☒ No Plume Present

Emission Color: **N/A** Plume Type: ☒ No Plume Present  
☐ Continuous ☐ Fugitive ☐ Intermittent

Water Droplets Present?  
☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached

At what point in the plume was opacity determined?  
**2 ft. above top of stack**

Describe Background (i.e. blue sky, trees, etc.): **Blue sky**

Background Color: **Blue** Sky Conditions: **Clear**

Wind Speed: **5-8 mph** Wind Direction: **From SSE**  
 (provide from/to, i.e. from North to South)

Ambient Temperature: **36 °F** Relative Humidity: **34%**

Additional Comments Information:  
**Fuel oil burn exercise**

Stack with Plume:

Sun:

Wind:

**SOURCE LAYOUT SKETCH**

Emission Point:

Draw Arrow in North Direction:

OBSERVER'S POSITION:

SUN LOCATION LINE:

140°

| Observation Date |     | Start Time |    | End Time |    |
|------------------|-----|------------|----|----------|----|
| 3-4-08           |     | 1113       |    | 1123     |    |
| Min              | Sec | 0          | 15 | 30       | 45 |
| 1                | 0   | 0          | 0  | 0        |    |
| 2                | 0   | 0          | 0  | 0        |    |
| 3                | 0   | 0          | 0  | 0        |    |
| 4                | 0   | 0          | 0  | 0        |    |
| 5                | 0   | 0          | 0  | 0        |    |
| 6                | 0   | 0          | 0  | 0        |    |
| 7                | 0   | 0          | 0  | 0        |    |
| 8                | 0   | 0          | 0  | 0        |    |
| 9                | 0   | 0          | 0  | 0        |    |
| 10               | 0   | 0          | 0  | 0        |    |
| 11               |     |            |    |          |    |
| 12               |     |            |    |          |    |
| 13               |     |            |    |          |    |
| 14               |     |            |    |          |    |
| 15               |     |            |    |          |    |
| 16               |     |            |    |          |    |
| 17               |     |            |    |          |    |
| 18               |     |            |    |          |    |
| 19               |     |            |    |          |    |
| 20               |     |            |    |          |    |

Average 10-Minute Opacity: **0%** Range of Opacity Readings: Min. **0%** Max. **0%**

OBSERVER (please print): **Don Stone** Title: **Engineer**

Signature: Date: **3-4-08**

Observer Organization: **KSL**

Certified by: **ETA** Certification Date: **2-27-08**

THIS FORM IS FROM EAQ-307, R4



LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>TA-3-22 Power Plant</b>                                                                                                                                                                                                                             |                                                                                                                                                                                 |
| Source Location:<br><b>TA-3-22</b>                                                                                                                                                                                                                                     |                                                                                                                                                                                 |
| Type of Source:<br><b>Boiler #1</b>                                                                                                                                                                                                                                    | Type of Control Equipment:<br><b>No Particulate Control</b>                                                                                                                     |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of boiler #1 stack</b>                                                                                                                                                                                         |                                                                                                                                                                                 |
| Height Above Ground Level:<br><b>150 Feet</b>                                                                                                                                                                                                                          | Height Relative to Observer:<br><b>140 Feet</b>                                                                                                                                 |
| Distance From Observer:<br><b>200 Feet</b>                                                                                                                                                                                                                             | Direction of Source From Observer:<br><b>ENE</b>                                                                                                                                |
| Description of Plume (stack exit only)<br><input type="checkbox"/> Lifting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><b>N/A</b>                                                                                                                                                                                                                                          | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                            |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><b>2 ft. above top of stack</b>                                                                                                                                                                                  |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                   |                                                                                                                                                                                 |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                       | Sky Conditions:<br><b>Clear</b>                                                                                                                                                 |
| Wind Speed:<br><b>5.8 mph</b>                                                                                                                                                                                                                                          | Wind Direction:<br>(provide from/to, i.e. from North to South)<br><b>From SSE</b>                                                                                               |
| Ambient Temperature:<br><b>38 °F</b>                                                                                                                                                                                                                                   | Relative Humidity:<br><b>32%</b>                                                                                                                                                |
| Additional Comments/Information:<br><b>Fuel Oil burn exercise</b>                                                                                                                                                                                                      |                                                                                                                                                                                 |

|                                             |                                                                                                           |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Stack with Plume<br><br>Sun<br><br>Wind<br> | <b>SOURCE LAYOUT SKETCH</b><br><br>Emission Point (X)<br>OBSERVER'S POSITION<br>140'<br>SUN LOCATION LINE |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------|

| Observation Date:<br><b>3-4-08</b>                                       |     | Start Time:<br><b>1147</b> |    | End Time:<br><b>1157</b>                                   |    |
|--------------------------------------------------------------------------|-----|----------------------------|----|------------------------------------------------------------|----|
| Min                                                                      | Sec | 0                          | 15 | 30                                                         | 45 |
| 1                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 2                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 3                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 4                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 5                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 6                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 7                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 8                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 9                                                                        |     | 0                          | 0  | 0                                                          | 0  |
| 10                                                                       |     | 0                          | 0  | 0                                                          | 0  |
| 11                                                                       |     |                            |    |                                                            |    |
| 12                                                                       |     |                            |    |                                                            |    |
| 13                                                                       |     |                            |    |                                                            |    |
| 14                                                                       |     |                            |    |                                                            |    |
| 15                                                                       |     |                            |    |                                                            |    |
| 16                                                                       |     |                            |    |                                                            |    |
| 17                                                                       |     |                            |    |                                                            |    |
| 18                                                                       |     |                            |    |                                                            |    |
| 19                                                                       |     |                            |    |                                                            |    |
| 20                                                                       |     |                            |    |                                                            |    |
| Average 10-Minute Opacity:<br><b>0%</b>                                  |     |                            |    | Range of Opacity Readings<br>Min. <b>0%</b> Max. <b>0%</b> |    |
| OBSERVER (please print)<br>Name: <b>Don Stone</b> Title: <b>Engineer</b> |     |                            |    |                                                            |    |
| Signature: <b>Don Stone</b>                                              |     |                            |    | Date: <b>3-4-08</b>                                        |    |
| Observer Organization: <b>KSL</b>                                        |     |                            |    |                                                            |    |
| Certified by: <b>ETA</b>                                                 |     |                            |    | Certification Date: <b>2-27-08</b>                         |    |

THIS FORM IS FROM EAQ-307, R4



LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>TA-3-22 Power Plant</b>                                                                                                                                                                                                                             |                                                                                                                                                                                 |
| Source Location:<br><b>TA-3-22</b>                                                                                                                                                                                                                                     |                                                                                                                                                                                 |
| Type of Source:<br><b>Boiler #2</b>                                                                                                                                                                                                                                    | Type of Control Equipment:<br><b>No Particulate Control</b>                                                                                                                     |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of boiler #2 stack</b>                                                                                                                                                                                         |                                                                                                                                                                                 |
| Height Above Ground Level:<br><b>150</b> Feet                                                                                                                                                                                                                          | Height Relative to Observer:<br><b>140</b> Feet                                                                                                                                 |
| Distance From Observer:<br><b>200</b> Feet                                                                                                                                                                                                                             | Direction of Source From Observer:<br><b>ENE</b>                                                                                                                                |
| Description of Plume (stack exit only)<br><input type="checkbox"/> Lifting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><b>N/A</b>                                                                                                                                                                                                                                          | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                            |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><b>1 ft. above top of stack</b>                                                                                                                                                                                  |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                   |                                                                                                                                                                                 |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                       | Sky Conditions:<br><b>Clear</b>                                                                                                                                                 |
| Wind Speed:<br><b>10-15</b> mph                                                                                                                                                                                                                                        | Wind Direction (provide from/to, i.e. from North to South):<br><b>From NNE</b>                                                                                                  |
| Ambient Temperature:<br><b>42</b> °F                                                                                                                                                                                                                                   | Relative Humidity:<br><b>29</b> %                                                                                                                                               |
| Additional Comments Information:<br><b>FUEL OIL BURN EXERCISES</b>                                                                                                                                                                                                     |                                                                                                                                                                                 |

|                                             |                                                                                                       |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Stack with Plume<br><br>Sun<br><br>Wind<br> | <b>SOURCE LAYOUT SKETCH</b><br><br>Emission Point<br>OBSERVER'S POSITION<br>SUN LOCATION LINE<br>140° |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------|

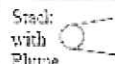
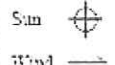

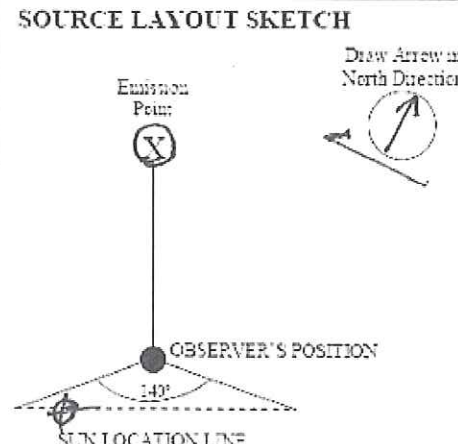
|                                                                          |                            |                                                            |    |    |          |
|--------------------------------------------------------------------------|----------------------------|------------------------------------------------------------|----|----|----------|
| Observation Date:<br><b>3-18-08</b>                                      | Start Time:<br><b>1133</b> | End Time:<br><b>1143</b>                                   |    |    |          |
| Sec                                                                      | 0                          | 15                                                         | 30 | 45 | Comments |
| Min                                                                      |                            |                                                            |    |    |          |
| 1                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 2                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 3                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 4                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 5                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 6                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 7                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 8                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 9                                                                        | 0                          | 0                                                          | 0  | 0  |          |
| 10                                                                       | 0                          | 0                                                          | 0  | 0  |          |
| 11                                                                       |                            |                                                            |    |    |          |
| 12                                                                       |                            |                                                            |    |    |          |
| 13                                                                       |                            |                                                            |    |    |          |
| 14                                                                       |                            |                                                            |    |    |          |
| 15                                                                       |                            |                                                            |    |    |          |
| 16                                                                       |                            |                                                            |    |    |          |
| 17                                                                       |                            |                                                            |    |    |          |
| 18                                                                       |                            |                                                            |    |    |          |
| 19                                                                       |                            |                                                            |    |    |          |
| 20                                                                       |                            |                                                            |    |    |          |
| Average 10-Minute Opacity:<br><b>0%</b>                                  |                            | Range of Opacity Readings<br>Min. <b>0%</b> Max. <b>0%</b> |    |    |          |
| OBSERVER (please print)<br>Name: <b>Don Stone</b> Title: <b>Engineer</b> |                            |                                                            |    |    |          |
| Signature: <b>Don Stone</b>                                              |                            | Date: <b>3-18-08</b>                                       |    |    |          |
| Observer Organization: <b>KSL</b>                                        |                            |                                                            |    |    |          |
| Certified by: <b>ETA</b>                                                 |                            | Certification Date: <b>2-27-08</b>                         |    |    |          |


THIS FORM IS FROM EAQ-307, R1

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>TA-3-22 Power Plant</b>                                                                                                                                                                                                                              |                                                                                                                                                                                 |
| Source Location:<br><b>TA-3-22</b>                                                                                                                                                                                                                                      |                                                                                                                                                                                 |
| Type of Source:<br><b>Boiler #3</b>                                                                                                                                                                                                                                     | Type of Control Equipment:<br><b>No Particulate Control</b>                                                                                                                     |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of Boiler #3 stack</b>                                                                                                                                                                                          |                                                                                                                                                                                 |
| Height Above Ground Level:<br><b>150 Feet</b>                                                                                                                                                                                                                           | Height Relative to Observer:<br><b>160 Feet</b>                                                                                                                                 |
| Distance From Observer:<br><b>250 Feet</b>                                                                                                                                                                                                                              | Direction of Source From Observer:<br><b>NW</b>                                                                                                                                 |
| Description of Plume (stack exit only):<br><input type="checkbox"/> Lifting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Fanning <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><b>N/A</b>                                                                                                                                                                                                                                           | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                             |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><b>~1 ft. above top of stack</b>                                                                                                                                                                                  |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                    |                                                                                                                                                                                 |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                        | Sky Conditions:<br><b>clear</b>                                                                                                                                                 |
| Wind Speed:<br><b>5.7 mph</b>                                                                                                                                                                                                                                           | Wind Direction (provide from to, i.e. from North to South):<br><b>From E</b>                                                                                                    |
| Ambient Temperature:<br><b>52 °F</b>                                                                                                                                                                                                                                    | Relative Humidity:<br><b>23 %</b>                                                                                                                                               |
| Additional Comments/Information:<br><b>Fuel Oil burn exercises</b>                                                                                                                                                                                                      |                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                      |                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Stack with Plume<br><br>Sun<br><br>Wind<br> | <b>SOURCE LAYOUT SKETCH</b><br> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

| Observation Date:<br><b>3-25-08</b>                                                             |     | Start Time:<br><b>0956</b> |    | End Time:<br><b>1006</b>                                      |    |
|-------------------------------------------------------------------------------------------------|-----|----------------------------|----|---------------------------------------------------------------|----|
| Min                                                                                             | Sec | 0                          | 15 | 30                                                            | 45 |
| 1                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 2                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 3                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 4                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 5                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 6                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 7                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 8                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 9                                                                                               |     | 0                          | 0  | 0                                                             | 0  |
| 10                                                                                              |     | 0                          | 0  | 0                                                             | 0  |
| 11                                                                                              |     |                            |    |                                                               |    |
| 12                                                                                              |     |                            |    |                                                               |    |
| 13                                                                                              |     |                            |    |                                                               |    |
| 14                                                                                              |     |                            |    |                                                               |    |
| 15                                                                                              |     |                            |    |                                                               |    |
| 16                                                                                              |     |                            |    |                                                               |    |
| 17                                                                                              |     |                            |    |                                                               |    |
| 18                                                                                              |     |                            |    |                                                               |    |
| 19                                                                                              |     |                            |    |                                                               |    |
| 20                                                                                              |     |                            |    |                                                               |    |
| Average 10-Minute Opacity:<br><b>0 %</b>                                                        |     |                            |    | Range of Opacity Readings:<br>Min. <b>0 %</b> Max. <b>0 %</b> |    |
| OBSERVER (please print):<br>Name: <b>Don Stone</b> Title: <b>Engineer</b>                       |     |                            |    |                                                               |    |
| Signature:  |     |                            |    | Date: <b>3-25-08</b>                                          |    |
| Observer Organization: <b>KSL</b>                                                               |     |                            |    |                                                               |    |
| Certified by: <b>ETA</b>                                                                        |     |                            |    | Certification Date: <b>2-27-08</b>                            |    |

THIS FORM IS FROM EAQ-307, R4

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><b>TA-3-22 Power Plant</b>                                                                                                                                                                                                                                           |                                                                                                                                                                                            |
| Source Location:<br><b>TA-3-22</b>                                                                                                                                                                                                                                                   |                                                                                                                                                                                            |
| Type of Source:<br><b>Boiler #1</b>                                                                                                                                                                                                                                                  | Type of Control Equipment:<br><b>NO Particulate Control</b>                                                                                                                                |
| Describe Emission Point (Top of stack, etc.):<br><b>Top of boiler #1 stack</b>                                                                                                                                                                                                       |                                                                                                                                                                                            |
| Height Above Ground Level:<br><b>150 Feet</b>                                                                                                                                                                                                                                        | Height Relative to Observer:<br><b>140 Feet</b>                                                                                                                                            |
| Distance From Observer:<br><b>200 Feet</b>                                                                                                                                                                                                                                           | Direction of Source From Observer:<br><b>ENE</b>                                                                                                                                           |
| Description of Plume (stack exit only):<br><input checked="" type="checkbox"/> Lifting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Flaring <input type="checkbox"/> Coasting<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                            |
| Emission Color:<br><b>Black</b>                                                                                                                                                                                                                                                      | Plume Type: <input type="checkbox"/> No Plume Present<br><input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input checked="" type="checkbox"/> Intermittent |
| Water Droplets Present:<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> YES, dry ice plume <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                       |                                                                                                                                                                                            |
| At what point in the plume was opacity determined?<br><b>1 ft. above top of stack</b>                                                                                                                                                                                                |                                                                                                                                                                                            |
| Describe Background (i.e. blue sky, trees, etc.):<br><b>Blue sky</b>                                                                                                                                                                                                                 |                                                                                                                                                                                            |
| Background Color:<br><b>Blue</b>                                                                                                                                                                                                                                                     | Sky Conditions:<br><b>Clear</b>                                                                                                                                                            |
| Wind Speed:<br><b>15-20 mph</b>                                                                                                                                                                                                                                                      | Wind Direction:<br>(provide from to, i.e. from North to South)<br><b>From SW</b>                                                                                                           |
| Ambient Temperature:<br><b>63 °F</b>                                                                                                                                                                                                                                                 | Relative Humidity:<br><b>10 %</b>                                                                                                                                                          |
| Additional Comments/Information:<br><b>Fuel Oil Burn Exercises</b>                                                                                                                                                                                                                   |                                                                                                                                                                                            |

|                                 |                                 |
|---------------------------------|---------------------------------|
| Stack with Plume<br>Sun<br>Wind | <b>SOURCE LAYOUT SKETCH</b><br> |
|---------------------------------|---------------------------------|

|                                             |     |                            |                           |                                                                |    |
|---------------------------------------------|-----|----------------------------|---------------------------|----------------------------------------------------------------|----|
| Observation Date:<br><b>4-15-08</b>         |     | Start Time:<br><b>1020</b> |                           | End Time:<br><b>1030</b>                                       |    |
| Min                                         | Sec | 0                          | 15                        | 30                                                             | 45 |
| Comments                                    |     |                            |                           |                                                                |    |
| 1                                           |     | 0                          | 0                         | 0                                                              |    |
| 2                                           |     | 0                          | 0                         | 0                                                              |    |
| 3                                           |     | 0                          | 0                         | 0                                                              |    |
| 4                                           |     | 0                          | 0                         | 0                                                              |    |
| 5                                           |     | 0                          | 0                         | 0                                                              |    |
| 6                                           |     | 0                          | 0                         | 0                                                              |    |
| 7                                           |     | 0                          | 0                         | 0                                                              |    |
| 8                                           |     | 0                          | 0                         | 0                                                              |    |
| 9                                           |     | 0                          | 0                         | 0                                                              |    |
| 10                                          |     | 10                         | 15                        | 5                                                              | 0  |
| 11                                          |     |                            |                           |                                                                |    |
| 12                                          |     |                            |                           |                                                                |    |
| 13                                          |     |                            |                           |                                                                |    |
| 14                                          |     |                            |                           |                                                                |    |
| 15                                          |     |                            |                           |                                                                |    |
| 16                                          |     |                            |                           |                                                                |    |
| 17                                          |     |                            |                           |                                                                |    |
| 18                                          |     |                            |                           |                                                                |    |
| 19                                          |     |                            |                           |                                                                |    |
| 20                                          |     |                            |                           |                                                                |    |
| Average 10-Minute Opacity:<br><b>0.75 %</b> |     |                            |                           | Range of Opacity Readings:<br>Min. <b>0 %</b> Max. <b>15 %</b> |    |
| OBSERVER (please print):                    |     |                            |                           |                                                                |    |
| Name:<br><b>Don Stone</b>                   |     |                            | Title:<br><b>Engineer</b> |                                                                |    |
| Signature:<br><i>Don Stone</i>              |     |                            | Date:<br><b>4-15-08</b>   |                                                                |    |
| Observer Organization:<br><b>KSL</b>        |     |                            |                           |                                                                |    |
| Certified by:<br><b>ETA</b>                 |     |                            |                           | Certification Date:<br><b>2-27-08</b>                          |    |

THIS FORM IS FROM EAQ-307, R4

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: **TA-3-22 Power Plant**  
Source Location: **TA-3-22**

Type of Source: **Boiler #1** Type of Control Equipment: **No Particulate Control**

Describe Emission Point (Top of stack, etc.): **Top of boiler #1 stack**

Height Above Ground Level: **150 Feet** Height Relative to Observer: **140 Feet**

Distance From Observer: **200 Feet** Direction of Source from Observer: **ENE**

Description of Plume (stack exit only):  
☒ Raising ☐ Trapping ☐ Lifting ☐ Fanning ☐ Clearing  
☐ No Plume Present

Emission Color: **Black** Plume Type: ☐ No Plume Present  
☐ Continuous ☐ Fugitive ☐ Intermittent

Water Droplets Present: **NO** ☐ YES ☒ YES. Droplet plume is ☐ Attached ☐ Detached

At what point in the plume was opacity determined? **2 ft. above top of stack**

Describe Background (i.e., blue sky, fog, etc.): **Blue sky**

Background Color: **Blue** Sky Condition: **Clear**

Wind speed: **15-20 mph** Wind Direction: **From SW**  
(specify from to to, from North to South)

Ambient Temperature: **64 °F** Relative Humidity: **10 %**

Additional Comments/Information: **Fuel Oil Burn Exercises**

Sketch with Plume:

SOURCE LAYOUT SKETCH

Draw Arrow in North Direction:

Observer's Position:

SUN LOCATION LINE:

| Observation Date |     | Start Time |    | End Time |    |
|------------------|-----|------------|----|----------|----|
| 4-15-08          |     | 1042       |    | 1052     |    |
| Min              | Sec | 0          | 15 | 30       | 45 |
| 1                | 5   | 5          | 0  | 0        |    |
| 2                | 5   | 5          | 5  | 0        |    |
| 3                | 0   | 5          | 5  | 0        |    |
| 4                | 0   | 0          | 0  | 0        |    |
| 5                | 0   | 0          | 0  | 0        |    |
| 6                | 0   | 0          | 0  | 0        |    |
| 7                | 0   | 0          | 0  | 0        |    |
| 8                | 0   | 0          | 0  | 0        |    |
| 9                | 0   | 0          | 0  | 0        |    |
| 10               | 0   | 0          | 0  | 0        |    |
| 11               |     |            |    |          |    |
| 12               |     |            |    |          |    |
| 13               |     |            |    |          |    |
| 14               |     |            |    |          |    |
| 15               |     |            |    |          |    |
| 16               |     |            |    |          |    |
| 17               |     |            |    |          |    |
| 18               |     |            |    |          |    |
| 19               |     |            |    |          |    |
| 20               |     |            |    |          |    |

Comments:

Average 10-Minute Opacity: **0.875** Range of Opacity Readings: Min **0%** Max **5%**

OBSERVER (please print): **Don Stone** Title: **ENGINEER**

Signature: Date: **4-15-08**

Observer Organization: **KSL**

Certified by: **ETA** Certification Date: **2-27-08**

THIS FORM IS FROM EAQ-307, R4



LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name:  
**Power Plant at TA-3**

Source Location:  
**TA-3-22**

Type of Source: **Boiler # 3** Type of Control Equipment: **No Particulate Control**

Describe Emission Point (Top of stack, etc.):  
**Top of Boiler #3 Stack**

Height Above Ground Level: **156** Feet Height Relative to Observer: **170** Feet

Distance From Observer: **200** Feet Direction of Source From Observer: **NW**

Description of Plume (stack exit only):  
☐ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning  
☒ No Plume Present

Emission Color: **N/A** Plume Type: ☒ No Plume Present  
☐ Continuous ☐ Fugitive ☐ Intermittent

Water Droplets Present?  
☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached

At what point in the plume was opacity determined?  
**~1 ft. above top of stack**

Describe Background (i.e. blue sky, trees, etc.):  
**white-gray sky**

Background Color: **white-gray** Sky Conditions: **cloudy**

Wind Speed: **0-4** mph Wind Direction: **From ESE**  
(provide from to, i.e. from North to South)

Ambient Temperature: **41** °F Relative Humidity: **81** %

Additional Comments/Information:  
**FUEL OIL BURN EXERCISES**

| Observation Date |   | Start Time |    |    |          | End Time |
|------------------|---|------------|----|----|----------|----------|
| 5-14-08          |   | 0844       |    |    |          | 0854     |
| Min \ Sec        | 0 | 15         | 30 | 45 | Comments |          |
| 1                | 0 | 0          | 0  | 0  |          |          |
| 2                | 0 | 0          | 0  | 0  |          |          |
| 3                | 0 | 0          | 0  | 0  |          |          |
| 4                | 0 | 0          | 0  | 0  |          |          |
| 5                | 0 | 0          | 0  | 0  |          |          |
| 6                | 0 | 0          | 0  | 0  |          |          |
| 7                | 0 | 0          | 0  | 0  |          |          |
| 8                | 0 | 0          | 0  | 0  |          |          |
| 9                | 0 | 0          | 0  | 0  |          |          |
| 10               | 0 | 0          | 0  | 0  |          |          |
| 11               |   |            |    |    |          |          |
| 12               |   |            |    |    |          |          |
| 13               |   |            |    |    |          |          |
| 14               |   |            |    |    |          |          |
| 15               |   |            |    |    |          |          |
| 16               |   |            |    |    |          |          |
| 17               |   |            |    |    |          |          |
| 18               |   |            |    |    |          |          |
| 19               |   |            |    |    |          |          |
| 20               |   |            |    |    |          |          |

Stack with Plume:

Sun:

Wind:

SOURCE LAYOUT SKETCH

Emission Point:

Draw Arrow in North Direction:

OBSERVER'S POSITION:

SUN LOCATION LINE:

Average 10-Minute Opacity: **0%** Range of Opacity Readings: Min. **0%** Max. **0%**

OBSERVER (please print):  
Name: **Don Stone** Title: **Engineer**  
Signature: **Don Stone** Date: **5-14-08**  
Observer Organization: **KSL**

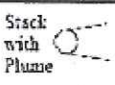
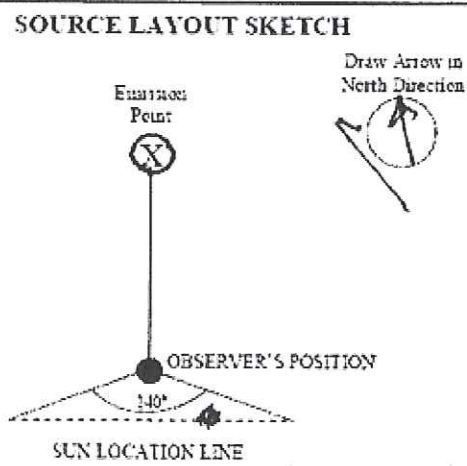
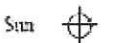
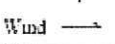
Certified by: **ETA** Certification Date: **2-27-08**

THIS FORM IS FROM EAQ-307, R4

Los Alamos

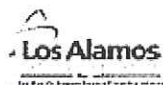
LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Name:<br><i>Power Plant at TA-3</i>                                                                                                                                                                                                                              |                                                                                                                                                                                 |
| Source Location:<br><i>TA-3-22</i>                                                                                                                                                                                                                                      |                                                                                                                                                                                 |
| Type of Source:<br><i>Boiler # 3</i>                                                                                                                                                                                                                                    | Type of Control Equipment:<br><i>No Particulate Control</i>                                                                                                                     |
| Describe Emission Point (Top of stack, etc.):<br><i>Top of Boiler # 3 stack</i>                                                                                                                                                                                         |                                                                                                                                                                                 |
| Height Above Ground Level:<br><i>150</i> Feet                                                                                                                                                                                                                           | Height Relative to Observer:<br><i>170</i> Feet                                                                                                                                 |
| Distance From Observer:<br><i>200</i> Feet                                                                                                                                                                                                                              | Direction of Source From Observer:<br><i>NW</i>                                                                                                                                 |
| Description of Plume (stack exit only):<br><input type="checkbox"/> Lofting <input type="checkbox"/> Trapping <input type="checkbox"/> Looping <input type="checkbox"/> Flaming <input type="checkbox"/> Coning<br><input checked="" type="checkbox"/> No Plume Present |                                                                                                                                                                                 |
| Emission Color:<br><i>N/A</i>                                                                                                                                                                                                                                           | Plume Type: <input checked="" type="checkbox"/> No Plume Present<br><input type="checkbox"/> Continuous <input type="checkbox"/> Fugitive <input type="checkbox"/> Intermittent |
| Water Droplets Present?<br><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, droplet plume is <input type="checkbox"/> Attached <input type="checkbox"/> Detached                                                                             |                                                                                                                                                                                 |
| At what point in the plume was opacity determined?<br><i>1 ft. above top of stack</i>                                                                                                                                                                                   |                                                                                                                                                                                 |
| Describe Background (i.e. blue sky, trees, etc.):<br><i>white-gray sky</i>                                                                                                                                                                                              |                                                                                                                                                                                 |
| Background Color:<br><i>white-gray</i>                                                                                                                                                                                                                                  | Sky Conditions:<br><i>cloudy</i>                                                                                                                                                |
| Wind Speed:<br><i>4-6</i> mph                                                                                                                                                                                                                                           | Wind Direction:<br>(provide from to, i.e. from North to South)<br><i>From ESE</i>                                                                                               |
| Ambient Temperature:<br><i>46</i> °F                                                                                                                                                                                                                                    | Relative Humidity:<br><i>75</i> %                                                                                                                                               |
| Additional Comments/Information:<br><i>Fuel oil burn exercises</i>                                                                                                                                                                                                      |                                                                                                                                                                                 |

|                                                                                                                                                                                                |                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stack with Plume<br>                                                                                        | <p><b>SOURCE LAYOUT SKETCH</b></p> <p>Draw Arrow in North Direction</p>  |
| <p>Sun </p> <p>Wind </p> |                                                                                                                                                             |

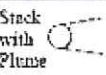
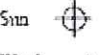
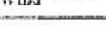


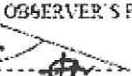
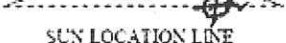
| Observation Date:<br><i>5-14-08</i>                                       |     | Start Time:<br><i>1003</i> |          | End Time:<br><i>1013</i>                                    |          |
|---------------------------------------------------------------------------|-----|----------------------------|----------|-------------------------------------------------------------|----------|
| Min                                                                       | Sec | 0                          | 15       | 30                                                          | 45       |
| 1                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 2                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 3                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 4                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 5                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 6                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 7                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 8                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 9                                                                         |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 10                                                                        |     | <i>0</i>                   | <i>0</i> | <i>0</i>                                                    | <i>0</i> |
| 11                                                                        |     |                            |          |                                                             |          |
| 12                                                                        |     |                            |          |                                                             |          |
| 13                                                                        |     |                            |          |                                                             |          |
| 14                                                                        |     |                            |          |                                                             |          |
| 15                                                                        |     |                            |          |                                                             |          |
| 16                                                                        |     |                            |          |                                                             |          |
| 17                                                                        |     |                            |          |                                                             |          |
| 18                                                                        |     |                            |          |                                                             |          |
| 19                                                                        |     |                            |          |                                                             |          |
| 20                                                                        |     |                            |          |                                                             |          |
| Average 10-Minute Opacity:<br><i>0%</i>                                   |     |                            |          | Range of Opacity Readings:<br>Min. <i>0%</i> Max. <i>0%</i> |          |
| OBSERVER (please print):<br>Name: <i>Don Stone</i> Title: <i>Engineer</i> |     |                            |          |                                                             |          |
| Signature: <i>Don Stone</i>                                               |     |                            |          | Date: <i>5-14-08</i>                                        |          |
| Observer Organization: <i>KSL</i>                                         |     |                            |          |                                                             |          |
| Certified by: <i>ETA</i>                                                  |     |                            |          | Certification Date: <i>2-27-08</i>                          |          |

THIS FORM IS FROM EAQ-307, R4



LOS ALAMOS NATIONAL LABORATORY (LANL)  
VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: Power Plant at TA-3  
Source Location: TA-3-22  
Type of Source: Boiler #2 Type of Control Equipment: No Particulate Control  
Describe Emission Point (Top of stack, etc.): Top of boiler #2 stack  
Height Above Ground Level: 150 Feet Height Relative to Observer: 170 Feet  
Distance From Observer: 200 Feet Direction of Source From Observer: NW  
Description of Plume (stack exit only):  
☐ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning  
☒ No Plume Present  
Emission Color: N/A Plume Type: ☒ No Plume Present  
☐ Continuous ☐ Fugitive ☐ Intermittent  
Water Droplets Present: ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached  
At what point in the plume was opacity determined?: 2 ft. above top of stack  
Describe Background (i.e. blue sky, trees, etc.): Gray sky  
Background Color: gray Sky Conditions: cloudy  
Wind Speed: 10-12 mph Wind Direction: From SE  
(provide from to, i.e. from North to South)  
Ambient Temperature: 39 °F Relative Humidity: 87 %  
Additional Comments/Information: Fuel oil burn exercises

Stack with Plume:   
Sun:   
Wind:   
SOURCE LAYOUT SKETCH  
Emission Point:   
Draw Arrow in North Direction:   
OBSERVER'S POSITION:   
SUN LOCATION LINE:   
140°

| Observation Date |       | Start Time |    | End Time | Comments |
|------------------|-------|------------|----|----------|----------|
| Min              | Sec   | 0          | 15 | 30       |          |
| 5-22-08          | 10:14 |            |    |          | 1024     |
| 1                | 0     | 0          | 0  | 0        |          |
| 2                | 0     | 0          | 0  | 0        |          |
| 3                | 0     | 0          | 0  | 0        |          |
| 4                | 0     | 0          | 0  | 0        |          |
| 5                | 0     | 0          | 0  | 0        |          |
| 6                | 0     | 0          | 0  | 0        |          |
| 7                | 0     | 0          | 0  | 0        |          |
| 8                | 0     | 0          | 0  | 0        |          |
| 9                | 0     | 0          | 0  | 0        |          |
| 10               | 0     | 0          | 0  | 0        |          |
| 11               |       |            |    |          |          |
| 12               |       |            |    |          |          |
| 13               |       |            |    |          |          |
| 14               |       |            |    |          |          |
| 15               |       |            |    |          |          |
| 16               |       |            |    |          |          |
| 17               |       |            |    |          |          |
| 18               |       |            |    |          |          |
| 19               |       |            |    |          |          |
| 20               |       |            |    |          |          |

Average 10-Minute Opacity: 0% Range of Opacity Readings: Min 0% Max 0%  
OBSERVER (please print): Don Stone Title: Engineer  
Signature: Don Stone Date: 5-22-08  
Observer Organization: KSL  
Certified by: ETA Certification Date: 2-27-08

THIS FORM IS FROM EAQ-307, R4

Part 2

Deviation Summary Report

1. Were any deviations reported to the Air Quality Bureau during this reporting period? If NO, answer question 2 below. If YES, complete the "Summary of Deviations Previously Reported" table below, then answer question 2.

☐ Yes ☒ No

SUMMARY OF DEVIATIONS PREVIOUSLY REPORTED

| Unit # and description | Date deviation reported | Tracking Number |
|------------------------|-------------------------|-----------------|
|------------------------|-------------------------|-----------------|

|                                                                                                                                                                                                                             |                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 2. Are there any deviations not yet reported? If No, no further information is required on the Deviation Summary Report. If Yes, answer question 3 below and enter the required information in the Deviation Summary Table. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. Did any of the deviations result in excess emissions? For deviations resulting in excess emissions a completed Excess Emission Form for each deviation must be attached to this report.                                  | <input type="checkbox"/> Yes <input type="checkbox"/> No            |

### Deviation Summary Table for deviations not yet reported.

| No. | Applicable Requirement<br>(Include Rule Citation) | Emission<br>Unit<br>ID(s) | Cause of Deviation | Corrective Action Taken |
|-----|---------------------------------------------------|---------------------------|--------------------|-------------------------|
| 1   |                                                   |                           |                    |                         |
| 2   |                                                   |                           |                    |                         |
| 3   |                                                   |                           |                    |                         |
| 4   |                                                   |                           |                    |                         |

### Deviation Summary Table (cont.)

| No. | Deviation Started |      | Deviation Ended |      | Pollutant | Monitoring Method | Amount of<br>Emissions | Did you attach an<br>excess emission<br>form?            |
|-----|-------------------|------|-----------------|------|-----------|-------------------|------------------------|----------------------------------------------------------|
|     | Date              | Time | Date            | Time |           |                   |                        |                                                          |
| 1   |                   |      |                 |      |           |                   |                        | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2   |                   |      |                 |      |           |                   |                        | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3   |                   |      |                 |      |           |                   |                        | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 4   |                   |      |                 |      |           |                   |                        | <input type="checkbox"/> Yes <input type="checkbox"/> No |